Dell™ XPS One™ Owner's Manual

Model MTG

www.dell.com | support.dell.com

Notes, Notices, and Cautions

NOTE: A NOTE indicates important information that helps you make better use of your computer.

NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

CAUTION: A CAUTION indicates a potential for property damage, personal injury, or death.

Information in this document is subject to change without notice.
© 2007 Dell Inc. All rights reserved.

Reproduction in any manner whatsoever without the written permission of Dell Inc. is strictly forbidden.

Trademarks used in this text: *Dell*, the *DELL* logo, *Inspiron*, *XPS*, *Dell Precision*, *Dimension*, *OptiPlex*, *Latitude*, *PowerEdge*, *PowerVault*, *PowerApp*, *and Dell OpenManage* are trademarks of Dell Inc.; *Intel*, *Pentium*, *and Celeron* are registered trademarks of Intel Corporation; *Microsoft*, *Windows*, *Windows Server*, *MS-DOS* and *Windows Vista* are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell Inc. disclaims any proprietary interest in trademarks and trade names other than its own.

Model MTG

September 2007 P/N CU557 Rev. A00

Contents

1 Finding Information 9

2 About Your Computer 15

Front View of the Computer **15**

Back View of the Computer **17**

Power Cable Routing 20

Optional TV Input Device (For Use With Optional TV Tuner) **21**

3 Setting Up Your Computer 23

Installing Your Computer in an Enclosure **23**

Connecting to the Internet **24**

Setting Up Your Internet Connection 24

Transferring Information to a New Computer **25**

Setting Up a Printer **26**

Printer Cable 26

Connecting a USB Printer 27

Power Protection Devices **28**
Surge Protectors 28
Line Conditioners 28
Uninterruptible Power Supplies 28

Using the Media Card Reader **29**

4 Using Multimedia 31

Using the Disc Drive **31**
Media Control Buttons 32
Disc and Disc-Slot Indicators 33

CD and DVD Software **33**
Copying CD, DVD, and Blu-ray Disc™ (BD) Media 34
Helpful Tips 37
Adjusting the Volume 38
Adjusting the Picture 38

Enabling S/PDIF Digital Audio **38**
Enabling S/PDIF in the Windows Audio Driver 39

Setting Up the Cyberlink (CL) Headphones **39**

5 Using the Optional Wireless Keyboard and Mouse 41

Media Control Keys **42**

Using the Touch Pad **43**
Customizing the Touch Pad 44

Re-Syncing Your Optional Wireless Mouse or Keyboard with Your Computer **44**

Key Combinations **46**

6 Using the Display 47

Adjusting Brightness **47**

Making Images and Text Look Bigger or Sharper . . . **47**

7 Cleaning Your Computer 49

Computer and Display **49**

CDs and DVDs **49**

Keyboard and Touch Pad **50**

8 Troubleshooting 51

Solving Problems **51**

Battery Problems 51

Display Problems 51

Drive Problems 52

E-Mail and Internet Problems 53

Error Messages 54

IEEE 1394 Device Problems 55

Keyboard Problems 55

Lockups and Software Problems 56

Memory Problems 58

Mouse Problems 58

Network Problems 60

Power Problems 60

Printer Problems 61
Scanner Problems 62
Sound and Speaker Problems 62
Touch Pad Problems 64

9 Dell Diagnostics 65

When to Use the Dell Diagnostics **65**

Starting the Dell Diagnostics From Your Hard Drive **65**

Starting the Dell Diagnostics From the Drivers and Utilities Media **66**

Dell Diagnostics Main Menu **67**

10 System Setup 69

Overview **69**

Entering System Setup **69**

System Setup Screen 69

System Setup Options **70**

Boot Sequence **73**

Option Settings 73

Changing the Boot Sequence for the Current Boot 73

Changing the Boot Sequence for Future Boots 74

11 Reinstalling Software 75

Drivers **75**

What Is a Driver? 75

Identifying Drivers 76

Reinstalling Drivers and Utilities 76

Troubleshooting Software and Hardware Problems in the Microsoft® Windows® Vista™ Operating Systems **78**

Restoring Your Operating System **78**

Using Microsoft Windows System Restore 78

Using Dell™ Factory Image Restore 80

Using the Operating System Media 81

12 Specifications 83

13 Getting Help 89

Obtaining Assistance **89**

Technical Support and Customer Service 90

DellConnect 90

Online Services 90

AutoTech Service 91

Automated Order-Status Service 91

Problems With Your Order **91**

Product Information **92**

Returning Items for Warranty Repair or Credit **92**

Before You Call **93**

Contacting Dell **95**

14 Appendix 97

FCC Notice (U.S. Only) **97**

FCC Class B 97

Glossary 99

Index 117

1

Finding Information

NOTE: Some features or media may be optional and may not ship with your computer. Some features or media may not be available in certain countries.

NOTE: Additional information may ship with your computer.

What Are You Looking For?	Find It Here
• A diagnostic program for my computer • Drivers for my computer • Desktop System Software (DSS)	**Drivers and Utilities Media** Documentation and drivers are already installed on your computer. You can use the media to reinstall drivers (see "Reinstalling Drivers and Utilities" on page 76), to run the Dell Diagnostics (see "Dell Diagnostics" on page 65). Readme files may be included on your media to provide last-minute updates about technical changes to your computer or advanced technical-reference material for technicians or experienced users. **NOTE:** Drivers and documentation updates can be found at **support.dell.com**.

What Are You Looking For?	Find It Here
• Warranty information • Terms and Conditions (U.S. only) • Safety instructions • Regulatory information • Ergonomics information • End User License Agreement	**Dell™ Product Information Guide**
• How to set up my computer	**Setup Diagram** **NOTE:** The appearance of your setup diagram may vary.

What Are You Looking For?	Find It Here
• Service Tag and Express Service Code • Microsoft Windows License Label	**Service Tag and Microsoft® Windows® License** These labels are located on your computer. • Use the Service Tag to identify your computer when you use **support.dell.com** or contact support. • Enter the Express Service Code to direct your call when contacting support. **NOTE:** As an increased security measure, the newly designed Microsoft Windows license label incorporates a missing portion or "hole" to discourage removal of the label.

What Are You Looking For?	Find It Here
• Solutions — Troubleshooting hints and tips, articles from technicians, and online courses, frequently asked questions • Community — Online discussion with other Dell customers • Upgrades — Upgrade information for components, such as memory, the hard drive, and the operating system • Customer Care — Contact information, service call and order status, warranty, and repair information • Service and support — Service call status and support history, service contract, online discussions with technical support • Dell Technical Update Service — Proactive e-mail notification of software and hardware updates for your computer • Reference — Computer documentation, details on my computer configuration, product specifications, and white papers • Downloads — Certified drivers, patches, and software updates	**Dell Support Website — support.dell.com** **NOTE:** Select your region or business segment to view the appropriate support site.
• Desktop System Software (DSS)— If you reinstall the operating system for your computer, you should also reinstall the DSS utility. DSS provides critical updates for your operating system and support for processors, optical drives, USB devices, and so on. DSS is necessary for correct operation of your Dell computer. The software automatically detects your computer and operating system and installs the updates appropriate for your configuration.	To download Desktop System Software: **1** Go to **support.dell.com**, select your region or business segment, and enter your Service Tag. **2** Select **Drivers & Downloads** and click **Go**. **3** Click your operating system and search for the keyword *Desktop System Software*. **NOTE:** The **support.dell.com** user interface may vary depending on your selections.

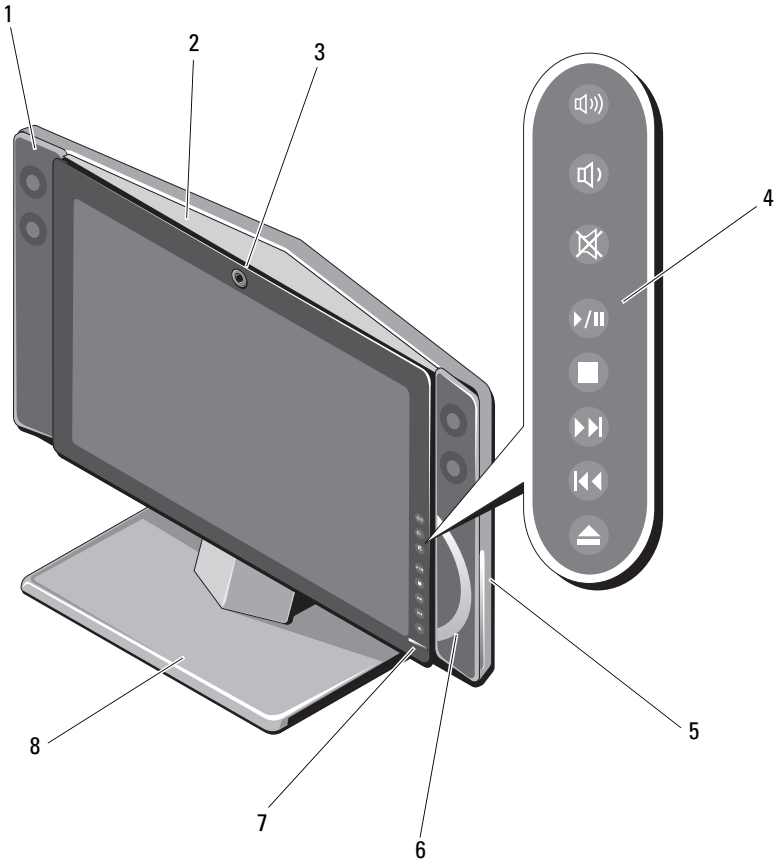
What Are You Looking For?	Find It Here
• How to use your Windows™ operating system • How to work with programs and files • How to personalize my desktop	**Windows Help and Support** **1** To access Windows Help and Support: • In Windows Vista™, click the Windows Vista Start button and click **Help and Support**. **2** Type a word or phrase that describes your problem, and then click the arrow icon. **3** Click the topic that describes your problem. **4** Follow the instructions on the screen.
• How to reinstall my operating system	**Operating System Media** The operating system is already installed on your computer. To reinstall your operating system, use the *Operating System* CD. See "Restoring Your Operating System" on page 78. After you reinstall your operating system, use the *Drivers and Utilities* CD to reinstall drivers for the devices that came with your computer. Your operating system product key label is located on your computer. **NOTE:** The color of your CD varies based on the operating system you ordered.

2

About Your Computer

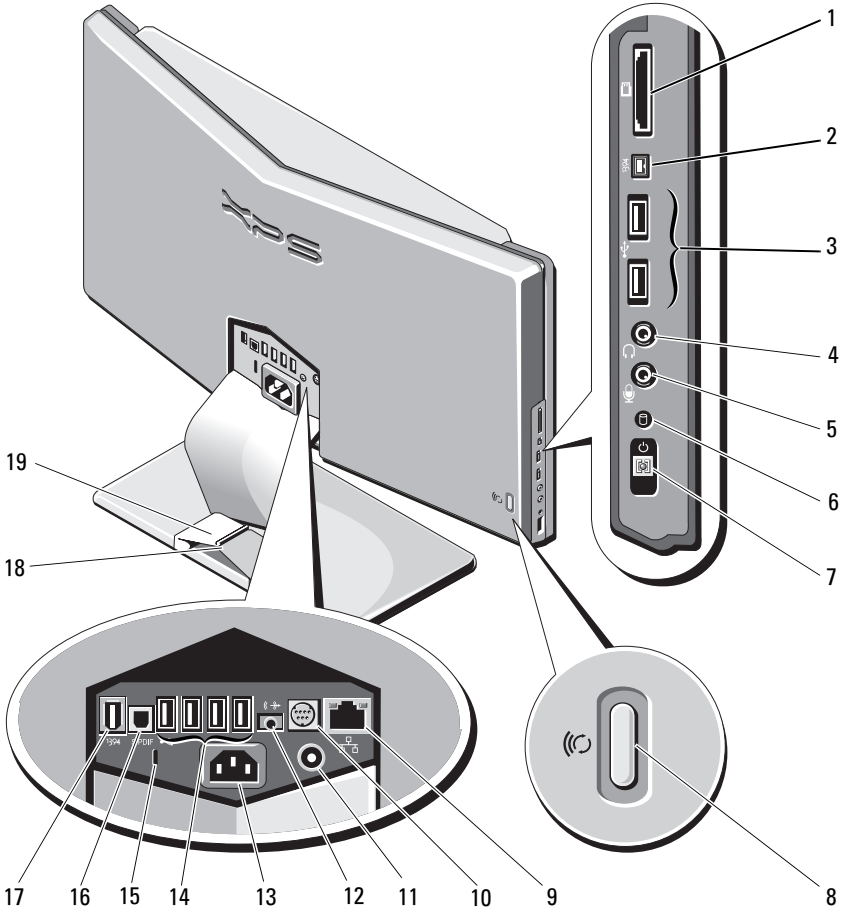
Front View of the Computer

CAUTION: Ensure that none of the computer air vents are blocked. Blocking them would cause serious thermal problems.



1	speakers (2)	To adjust the volume of the integrated speakers, press the appropriate media control buttons (see "Media Control Buttons" on page 32 for more information).
2	air vents	Internal fans create airflow through the vents to prevent the computer from overheating. The computer turns the fans on when the computer gets hot. Fan noise is normal and does not indicate a problem with the fans or the computer. **CAUTION: Ensure that none of the computer air vents are blocked. Blocking them would cause serious thermal problems.**
3	camera/ microphone array	Built-in camera and microphone array for video capture, conferencing, and chat. When the camera/microphone array is in use, the blue back-light lights up.
4	media control buttons	Control CD, DVD, Blu-ray Disc™ (BD), and Media Player play. See "Media Control Buttons" on page 32 for more information.
5	disc slot	Insert CD, DVD, or Blu-ray Disc™ (BD) as supported by your disc drive. The disc-slot indicator lights up when no disc is in the drive; see "Disc and Disc-Slot Indicators" on page 33 for more information. **NOTICE:** The optical drive does not support 8cm media. Do not insert 8cm media into the optical drive slot.
6	disc indicator	The disc indicator lights up when a disc is in the drive. See "Disc and Disc-Slot Indicators" on page 33 for more information.
7	display power button	Press to turn the display on and off without changing the overall operating state of the computer.
8	computer stand	Use the stand to tilt the display to your preferred angle. It can be rotated from 5° towards you to 25° back. The stand provides stability to the computer; it is not a removable part. **CAUTION: The computer stand should remain installed at all times to ensure maximum system stability.**

Back View of the Computer

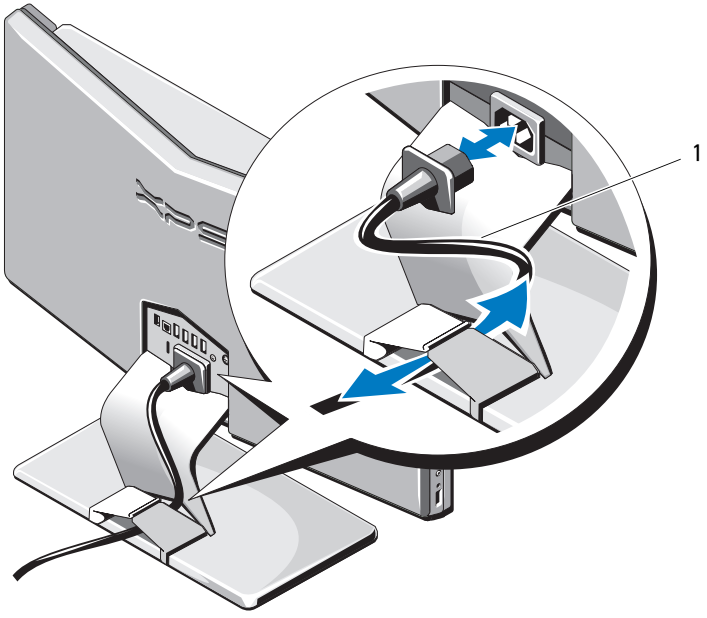


1	Media Card Reader	Provides a fast and convenient way to view and share digital photos, music, and videos stored on a memory card. The Media Card Reader reads the following digital memory cards: • Secure Digital (SD) memory card • SDIO card • MultiMediaCard (MMC) • Memory Stick • Memory Stick PRO • xD-Picture Card • Hi Speed-SD • Hi Density-SD
2	mini IEEE 1394 connector	Attach high-speed serial multimedia devices, such as digital video cameras.
3	USB 2.0 connectors (2)	Use the side USB connectors for devices that you connect occasionally, such as joysticks or cameras, or for bootable USB devices (see "System Setup Options" on page 70 for more information on booting to a USB device). It is recommended that you use the back USB connectors for devices that typically remain connected, such as printers and keyboards.
4	headphone/line-out connector	Use the headphone/line-out connector to attach headphones and most kinds of speakers.
5	microphone/line-in connector	Use the microphone/line-in connector to attach a personal computer microphone for voice or musical input into a sound or telephony program.
6	drive activity light	The drive activity light is on when the computer reads data from or writes data to the hard drive. The light might also be on when a device such as an optical drive is operating.
7	power button, power light	Press the power button to turn on the computer. The light in the center of this button indicates power state. See "Controls and Lights" on page 87 for more information. **NOTICE:** To avoid losing data, do not use the power button to turn off the computer. Instead, perform an operating system shutdown.

8	computer sync button	To re-sync your optional wireless keyboard and mouse to your computer, press the sync button on the rear of your computer, then press the sync button on the device that you wish to use. See "Re-Syncing Your Optional Wireless Mouse or Keyboard with Your Computer" on page 44.
9	network adapter connector	To attach your computer to a network or broadband device, connect one end of a network cable to either a network port or your network or broadband device. Connect the other end of the network cable to the network adapter connector on the back panel of your computer. A click indicates that the network cable has been securely attached. **NOTE:** Do not plug a telephone cable into the network connector. **network activity light:** Flashes a yellow light when the computer is transmitting or receiving network data. A high volume of network traffic may make this light appear to be in a steady "on" state. **link integrity light**: Green — A good connection exists between the network and the computer. Off — The computer is not detecting a physical connection to the network.
10	optional TV input-device connector	10-pin connector to attach the optional TV-input device. The device is only necessary if you will not be connecting your TV via the optional TV-in connector. TV input-device connectors: S-video, composite video, and audio connectors, and IR blaster.
11	TV-in connector	TV-in connector — *only supported* on systems with optional TV tuner card.
12	2.0 audio out connector	Connect speakers for 2.0 audio.
13	power connector	Insert the power cable.
14	USB 2.0 connectors (4)	Use the back USB connectors for devices that typically remain connected, such as printers and keyboards. It is recommended that you use the side USB connectors for devices that you connect occasionally, such as joysticks or cameras.

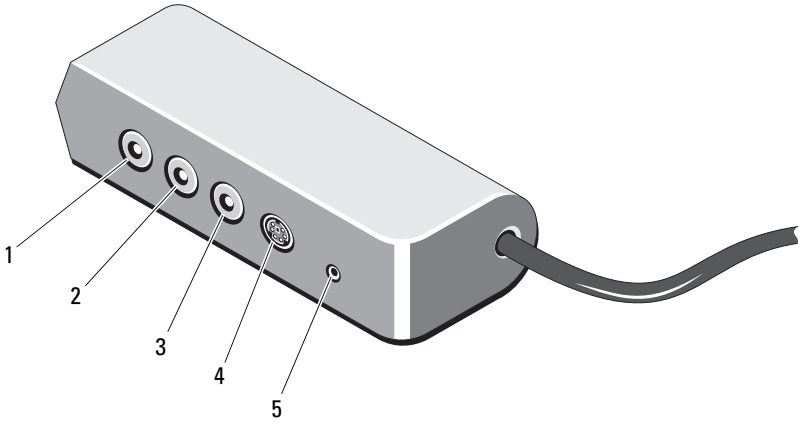
15	security cable slot	Lets you attach a commercially available antitheft device to the computer. **NOTICE:** Before you buy an antitheft device, ensure that it works with the security cable slot on your computer.
16	S/PDIF connector	Use the S/PDIF connector to transmit digital audio without going through an analog audio conversion process.
17	IEEE 1394 connector	Attach high-speed serial multimedia devices, such as digital video cameras.
18	Service Tag	Use the Service Tag to identify your computer when you access the Dell Support website or contact support.
19	cable routing flaps	Route power cord and other rear cables through these flaps to improve the appearance of your cables.

Power Cable Routing



1 power cable

Optional TV Input Device (For Use With Optional TV Tuner)



1 composite video
2 left audio output connector
3 right audio output connector
4 S-video connector
5 IR blaster

3

Setting Up Your Computer

Installing Your Computer in an Enclosure

Installing your computer in an enclosure can restrict the airflow and impact your computer's performance, possibly causing it to overheat. Follow the guidelines below when installing your computer in an enclosure:

NOTICE: The operating temperature specifications indicated in this manual reflects the maximum ambient operating temperature. The room ambient temperature needs to be a consideration when installing your computer in an enclosure. For example, if the ambient room temperature is at 25°C (77°F), depending on your computer's specifications, you only have 5° to 10°C (9° to 18°F) temperature margin before you reach your computer's maximum operating temperature. For details about your computer's specifications, see "Specifications" on page 83.

- Leave a 10.2 cm (4 in) minimum clearance on all vented sides of the computer to permit the airflow required for proper ventilation.
- If your enclosure has doors, they need to be of a type that allows at least 30 percent airflow through the enclosure (front and back).
- If your computer is installed in a corner on a desk or under a desk, leave at least 5.1 cm (2 in) clearance from the back of the computer to the wall to permit the airflow required for proper ventilation.

NOTICE: Do not install your computer in an enclosure that does not allow airflow. Restricting the airflow impacts your computer's performance, possibly causing it to overheat.

Connecting to the Internet

NOTE: ISPs and ISP offerings vary by country.

To connect to the Internet, you need a network connection and an Internet service provider (ISP). Your ISP will offer one or more of the following Internet connection options:

- DSL connections that provide high-speed Internet access through your existing telephone line or cellular telephone service. With a DSL connection, you can access the Internet and use your telephone on the same line simultaneously.
- Cable modem connections that provide high-speed Internet access through your local cable TV line.
- Satellite modem connections that provide high-speed Internet access through a satellite television system.
- Wireless LAN connections that provide Internet access using Bluetooth® wireless technology.

If you are using a DSL or cable/satellite modem connection, contact your ISP or cellular telephone service for setup instructions.

Setting Up Your Internet Connection

To set up an Internet connection with a provided ISP desktop shortcut:

1. Save and close any open files, and exit any open programs.
2. Double-click the ISP icon on the Microsoft® Windows® desktop.
3. Follow the instructions on the screen to complete the setup.

If you do not have an ISP icon on your desktop or if you want to set up an Internet connection with a different ISP, perform the steps in the following section.

NOTE: If you are having problems connecting to the Internet, see "E-Mail and Internet Problems" on page 53. If you cannot connect to the Internet but have successfully connected in the past, the ISP might have a service outage. Contact your ISP to check the service status, or try connecting again later.

NOTE: Have your ISP information ready. If you do not have an ISP, the **Connect to the Internet** wizard can help you get one.

1. Save and close any open files, and exit any open programs.
2. Click the Windows Vista Start button, and click **Control Panel**.
3. Under **Network and Internet,** click **Connect to the Internet**.

   The **Connect to the Internet** window appears.
4. Click **Broadband (PPPoE)** for a DSL, satellite modem, cable TV modem, or Bluetooth wireless technology connection.

NOTE: If you do not know which type of connection to select, click **Help me choose** or contact your ISP.

5. Follow the instructions on the screen and use the setup information provided by your ISP to complete the setup.

Transferring Information to a New Computer

You can use your operating system "wizards" to help you transfer files and other data from one computer to another—for example, from an *old* computer to a *new* computer.

The Microsoft Windows Vista™ operating system provides the Windows Easy Transfer application to move data from a source computer to a new computer. You can transfer data, such as:

- E-mail messages
- Toolbar settings
- User accounts
- Internet bookmarks

You can transfer the data to the new computer over a network or serial connection, or you can store it on removable media, such as a writable CD, for transfer to the new computer.

NOTE: For more information about options available with Windows Easy Transfer, see Microsoft Knowledge Base Article #928634, titled *How to use Windows Easy Transfer to migrate files and settings from one Windows-based computer to another Windows Vista-based computer.* This information may not be available in certain countries.

1. Click the Windows Vista Start button, and then click **Transfer files and settings→ Start Windows Easy Transfer.**
2. In the **User Account Control** dialog box, click **Continue**.
3. Click **Start a new transfer** or **Continue a transfer in progress**.

Follow the instructions provided on the screen by the Windows Easy Transfer wizard.

Setting Up a Printer

NOTICE: Complete the operating system setup before you connect a printer to the computer.

See the documentation that came with the printer for setup information, including how to:

- Obtain and install updated drivers.
- Connect the printer to the computer.
- Load paper and install the toner or ink cartridge.

For technical assistance, refer to the printer owner's manual or contact the printer manufacturer.

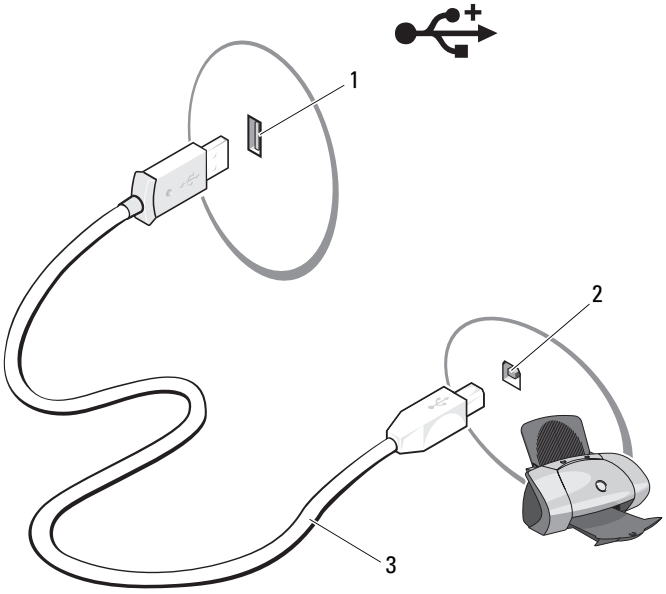
Printer Cable

Your printer connects to your computer with a USB cable. Your printer may not come with a printer cable, so if you purchase a cable separately, ensure that it is compatible with your printer and computer. If you purchased a printer cable at the same time you purchased your computer, the cable may arrive in the computer's shipping box.

Connecting a USB Printer

NOTE: You can connect USB devices while the computer is turned on.

1. Complete the operating system setup if you have not already done so.
2. Attach the USB printer cable to the USB connectors on the computer and the printer. The connectors fit only one way.



1 USB connector on computer 2 USB connector on printer

3 USB printer cable

3. Turn on the printer.
4. If your computer is running the Windows Vista™ operating system, click the Windows Vista Start button, and click **Network→ Add a printer** to start the Add Printer Wizard.
5. Install the printer driver if necessary. See "Reinstalling Drivers and Utilities" on page 76 and the documentation that came with your printer.

Power Protection Devices

Several devices are available to protect against power fluctuations and failures:

- Surge protectors
- Line conditioners
- Uninterruptible power supplies (UPS)

Surge Protectors

Surge protectors and power strips equipped with surge protection help prevent damage to your computer from voltage spikes that can occur during electrical storms or after power interruptions. Some surge protector manufacturers include warranty coverage for certain types of damage. Carefully read the device warranty when choosing a surge protector. A device with a higher joule rating offers more protection. Compare joule ratings to determine the relative effectiveness of different devices.

NOTICE: Most surge protectors do not protect against power fluctuations or power interruptions caused by nearby lightning strikes. Disconnect the network cable from the network wall jack during electrical storms.

Line Conditioners

NOTICE: Line conditioners do not protect against power interruptions.

Line conditioners are designed to maintain AC voltage at a fairly constant level.

Uninterruptible Power Supplies

NOTICE: Loss of power while data is being saved to the hard drive may result in data loss or file damage.

NOTE: To ensure maximum battery operating time, connect only your computer to a UPS. Connect other devices, such as a printer, to a separate power strip that provides surge protection.

A UPS protects against power fluctuations and interruptions. UPS devices contain a battery that provides temporary power to connected devices when AC power is interrupted. The battery charges while AC power is available. See

the UPS manufacturer documentation for information on battery operating time and to ensure that the device is approved by Underwriters Laboratories (UL).

Using the Media Card Reader

Use the Media Card Reader to transfer data directly to your computer.

NOTE: A memory card is not a bootable device.

The Media Card Reader reads the following memory cards:

- Secure Digital (SD)
- SDIO
- MultiMediaCard (MMC)
- Memory Stick
- Memory Stick PRO
- xD-Picture Card
- HiSpeed-SD
- Hi Capacity-SD

4

Using Multimedia

Using the Disc Drive

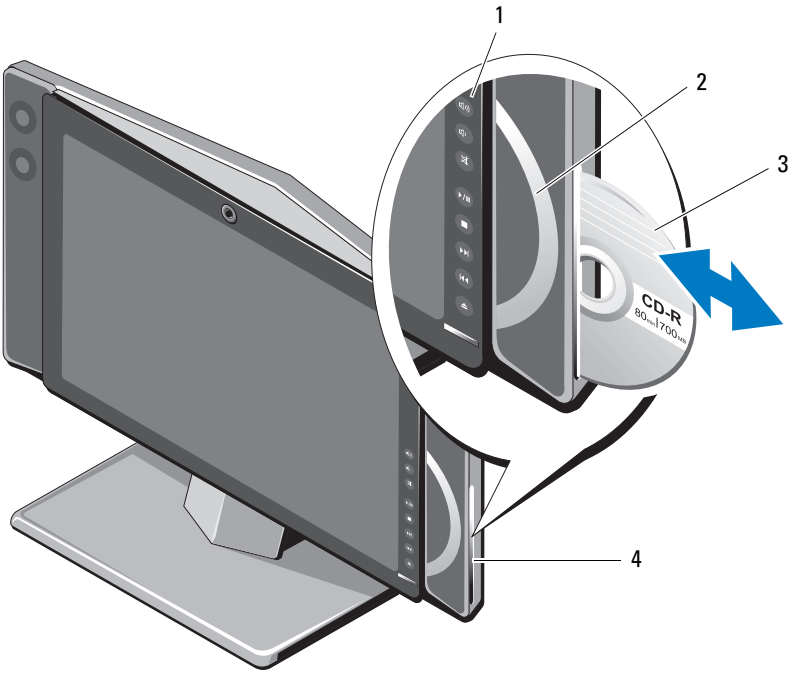
CAUTION: Do not insert *any* objects into the disc drive; it could be damaged.

NOTICE: Do not move the computer while playing CDs, DVDs, or other media.

1 Place the disc, label side facing forward, in the center of the disc slot.

2 Gently push the disc into the disk slot.

NOTE: This step may require you to push the disc farther than you expect.



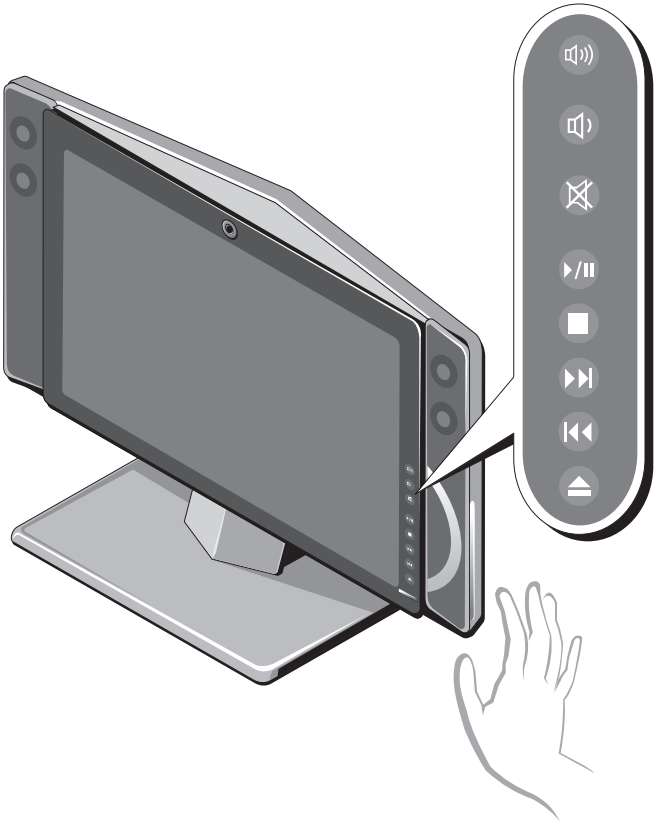
1 media control buttons
2 disc indicator
3 disc
4 disc-slot indicator

Media Control Buttons

NOTE: The media control buttons are capacitive buttons, and as such, may feel different from other buttons when pressed.

The top four media control buttons to the right of your display may flash during startup.

The media control buttons only light up when the user's hand is detected in close proximity to the right of the display. Your keyboard may also incorporate some of these media control buttons.



	Turn the volume up.		Turn the volume down.
	Mute the sound.		Play or pause.
	Stop.		Play the next track.
	Play the previous track.		Eject. **NOTE:** After you press **Eject**, there may be a slight pause before the disc ejects.

Disc and Disc-Slot Indicators

Either the disc or disc-slot indicator lights up when a user's hand is detected in its vicinity. The disc indicator lights up when the drive is occupied and the disc-slot indicator lights up when it is empty.

CD and DVD Software

To format CDs for storing data, to create music CDs, or to copy CDs, see the CD software that came with your computer.

NOTE: Ensure that you follow all copyright laws when you create CDs.

CD player software includes the following basic buttons:

NOTE: You should also be able to use the media control buttons to the right of your display and if you have the optional optimized wireless keyboard, the media control buttons on your keyboard.

	Play.
	Move backward within the current track.
	Pause.
	Move forward within the current track.
	Stop.

	Go to the previous track.
	Eject.
	Go to the next track.

DVD and Blu-Ray Disc™ (BD) player software includes the following basic buttons:

	Stop.
	Restart the current chapter.
	Play.
	Fast forward.
	Pause.
	Fast reverse.
	Advance a single frame while in pause mode.
	Go to the next title or chapter.
	Continuously play the current title or chapter.
	Go to the previous title or chapter.
	Eject.

For more information on playing CDs, DVDs, or Blu-ray Discs (BDs), click **Help** in the media player interface (if available).

Copying CD, DVD, and Blu-ray Disc™ (BD) Media

This section applies only to computers that have a DVD+/-RW drive or a BD-RE drive.

NOTE: Ensure that you observe all copyright laws when copying media.

NOTE: The types of optical drives offered by Dell may vary by country.

The following instructions explain how to make a copy of a CD, DVD, or BD using Roxio Creator. You can also use Roxio Creator for other purposes, such as creating music CDs from audio files stored on your computer or backing up important data. For help, open Roxio Creator, and then press <F1>.

The DVD drives and BD drives installed in Dell computers do not support HD-DVD media. For a list of supported media formats, see "Using Blank CD, DVD, and BD Media" on page 35.

How to Copy a CD, DVD, or BD

NOTE: BD media can only be copied to other BD media. DVD media can only be copied to other DVD-recordable/rewritable media. CD media can only be copied to other CD-recordable/rewritable media.

NOTE: Copying a BD-R to BD-RE will not produce an exact copy. Border information will be lost.

NOTE: Most commercial DVDs and BDs have copyright protection and cannot be copied using Roxio Creator.

1. Open Roxio Creator.
2. Under the **Copy** tab, click **Disc Copy**.
3. Insert the source disc into the drive, ensure that the settings are correct, and then click the **Copy Disc** button to continue.

   The computer reads your source disc and copies the data to a temporary folder on your computer hard drive.
4. When prompted, insert a blank disc into the drive and click **OK**.

   Once you have finished copying the source disc, the disc that you have created automatically ejects.

Using Blank CD, DVD, and BD Media

CD-writable drives can only write to CD recording media. DVD-writable drives can write to both CD and DVD recording media. BD-writable drives can write to CD, DVD and BD recording media.

Use blank CD-Rs to record music or permanently store data files. After creating a CD-R, you cannot write to that CD-R again (see the Sonic documentation for more information). Use blank CD-RWs if you plan to erase, rewrite, or update information on that disc later.

Blank DVD+/-R or BD-R media can be used to permanently store large amounts of information. After you create a DVD+/-R or BD-R, you cannot write to that disc again if the disc is "finalized" or "closed" during the final stage of the disc creation process. Use blank DVD+/-RW or BD-RE media if you plan to erase, rewrite, or update information on that disc later.

CD-Writable Drives

Media Type	Read	Write	Rewritable
CD-R	Yes	Yes	No
CD-RW	Yes	Yes	Yes

DVD-Writable Drives

Media Type	Read	Write	Rewritable
CD-R	Yes	Yes	No
CD-RW	Yes	Yes	Yes
DVD+R	Yes	Yes	No
DVD-R	Yes	Yes	No
DVD+RW	Yes	Yes	Yes
DVD-RW	Yes	Yes	Yes
DVD+R DL	Yes	Yes	No
DVD-R DL	Yes	No	No

BD-Writable Drives

NOTE: Your BD-writable drive may not read / write HD-DVD media.

Media Type	Read	Write	Rewritable
CD-R	Yes	Yes	No
CD-RW	Yes	Yes	Yes
DVD+R	Yes	Yes	No
DVD-R	Yes	Yes	No
DVD+RW	Yes	Yes	Yes
DVD-RW	Yes	Yes	Yes
DVD+R DL	Yes	Yes	No
DVD-R DL	Yes	No	No

Media Type	Read	Write	Rewritable
BD-R	Yes	Yes	No
BD-RE	Yes	Yes	Yes

Helpful Tips

- Use Microsoft® Windows® Explorer to drag and drop files to a CD-R or CD-RW only after you start Roxio Creator and open a Creator project.
- Do not burn a blank CD-R or CD-RW to its maximum capacity; for example, do not copy a 650-MB file to a blank 650-MB CD. The CD-RW drive needs 1–2 MB of the blank space to finalize the recording.
- Use CD-Rs to burn music CDs that you want to play in regular stereos. CD-RWs do not play in most home or car stereos.
- Music MP3 files can be played only on MP3 players or on computers that have MP3 software installed.
- Use a blank CD-RW to practice CD recording until you are familiar with CD recording techniques. If you make a mistake, you can erase the data on the CD-RW and try again. You can also use blank CD-RWs to test music file projects before you record the project permanently to a blank CD-R.
- You cannot create audio DVDs with Roxio Creator.
- Commercially available DVD players used in home theater systems may not support all available DVD formats. For a list of formats supported by your DVD player, see the documentation provided with your DVD player or contact the manufacturer.
- Commercially available BD players used in home theater systems may not support all available BD formats. For a list of formats supported by your BD player, see the documentation provided with your BD player or contact the manufacturer.
- See the Roxio website at **www.sonic.com** for additional information.

Adjusting the Volume

NOTE: When the speakers are muted, you do not hear the CD or DVD playing.

1. Open the **Volume Control** window.
2. Click and drag the bar in the **Volume Control** column and slide it up or down to increase or decrease the volume.

For more information on volume control options, click **Help** in the **Volume Control** window.

Adjusting the Picture

If an error message notifies you that the current resolution and color depth are using too much memory and preventing DVD playback, adjust the display properties.

If your computer is running Microsoft Windows Vista™ Operating System:

1. Click the Windows Vista Start button, click **Control Panel**, and then click **Appearance and Personalization**.
2. Under **Personalization**, click **Adjust Screen Resolution**.

   The **Display Properties** window appears.
3. Under **Resolution:** click and drag the bar reduce the resolution setting.
4. In the drop-down menu under **Colors:**, click **Medium (16 bit)**.
5. Click **OK**.

Enabling S/PDIF Digital Audio

If your computer has a DVD drive, you can enable digital audio for DVD playback.

1. Launch the **Cyberlink PowerDVD** application.
2. Insert a DVD into the DVD drive.

   If the DVD begins playing, click the **Stop** button.
3. Click the **Settings** option.
4. Click the **DVD** option.
5. Click the **DVD Audio Setting** icon.

6 Click the arrows beside the **Speaker Configuration** setting to scroll through the options, and then select the **SPDIF** option.

7 Click the **Back** button once, and then click the **Back** button again to return to the main menu screen.

Enabling S/PDIF in the Windows Audio Driver

1 Double-click the speaker icon in the Windows notification area.

2 Click the **Options** menu and then click **Advanced Controls**.

3 Click **Advanced**.

4 Click **S/PDIF Interface**.

5 Click **Close**.

6 Click **OK**.

Setting Up the Cyberlink (CL) Headphones

NOTE: The CL headphone feature is available only if your computer has a DVD drive.

If your computer has a DVD drive, you can enable digital audio for DVD playback.

1 Launch the **Cyberlink PowerDVD** program.

2 Insert a DVD into the DVD drive.

If the DVD begins playing, click the **Stop** button.

3 Click the **Settings** option.

4 Click the **DVD** option.

5 Click the **DVD Audio Setting** icon.

6 Click the arrows beside the **Speaker Configuration** setting to scroll through the options, and select the **Headphones** option.

7 Click the arrows beside the **Audio listening mode** setting to scroll through the options, and select the **CL Headphone** option.

8 Click the arrows beside the **Dynamic range compression** option to select the most suitable option.

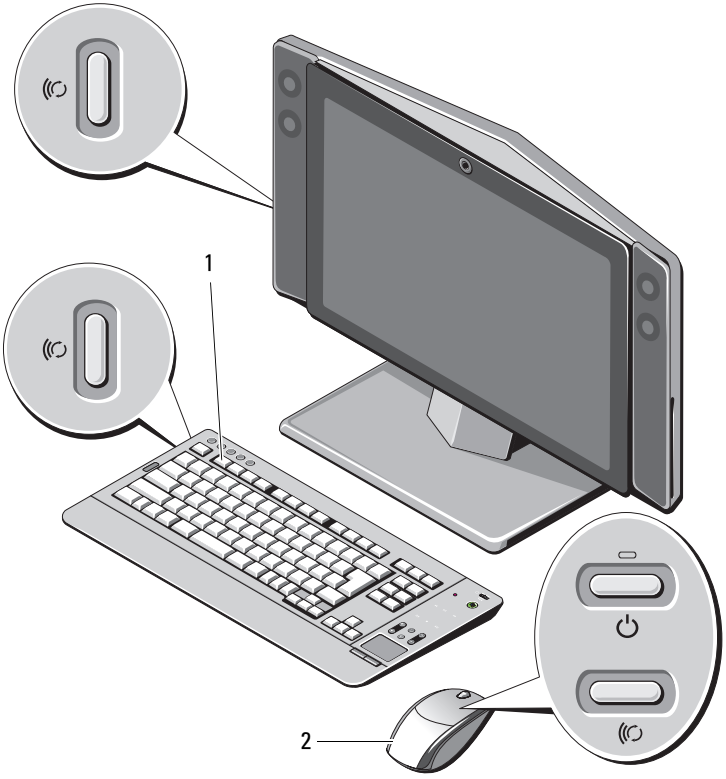
9 Click the **Back** button once, and then click the **Back** button again to return to the main menu screen.

5

Using the Optional Wireless Keyboard and Mouse

Your Dell™ XPS™ computer supports a special wireless (non-Bluetooth) keyboard and mouse which are optimized for use with your computer.

NOTE: The optional keyboard and mouse have special features which may not be available on other devices that could be used with your computer.



1 optimized wireless keyboard 2 optimized wireless mouse

Media Control Keys

NOTE: The media control keys are capacitive buttons, and as such, may feel different from other buttons when pressed.

The optional wireless keyboard has media control keys to aid you in quick control of volume and playback functions on your computer. These buttons light up when you press them.

In addition to the basic media control keys shown in "Using Multimedia" on page 31, the optional keyboard also incorporates the following keys.

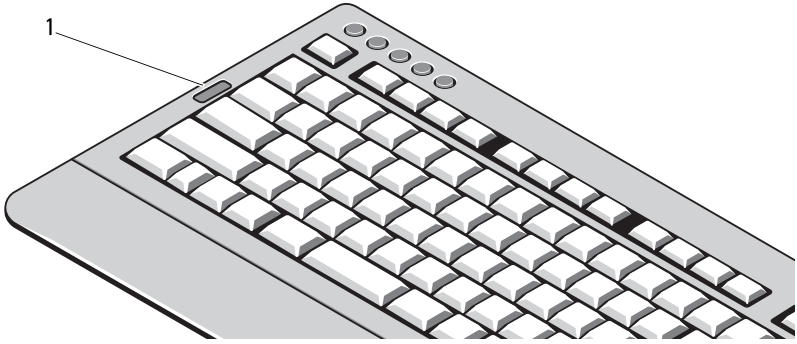
	Press to rewind within the current track/chapter.
	Press once to go back to the start of the current playing track/chapter. Press multiple times to skip back to previous track/chapters.
	Press to fast-forward within the current track/chapter.
	Press once to skip forward one track/chapter. Press multiple times to skip forward multiple tracks/chapters.
	Press to start or stop recording.
	Press to change channels (increasing).
	Press to change channels (decreasing).

Using the Touch Pad

The touch pad detects the pressure and movement of your finger to allow you to move the cursor on the display. Use the touch pad and touch-pad buttons as you would use a mouse.

1 touch pad 2 touch-pad buttons

- To move the cursor, lightly slide your finger over the touch pad.
- To select an object, lightly tap once on the surface of the touch pad or use your thumb to press the left touch-pad button *or* the alternate left touch-pad button to the left of the keyboard.



1 alternate left touch-pad button

- To select and move (or drag) an object, position the cursor on the object and tap twice on the touch pad. On the second tap, leave your finger on the touch pad and move the selected object by sliding your finger over the surface.
- To double-click an object, position the cursor on the object and tap twice on the touch pad or use your thumb to press the left touch-pad button twice (the alternate left touch-pad button to the left of the keyboard can also be used).

Customizing the Touch Pad

You can use the **Mouse Properties** window to disable the touch pad or adjust its settings.

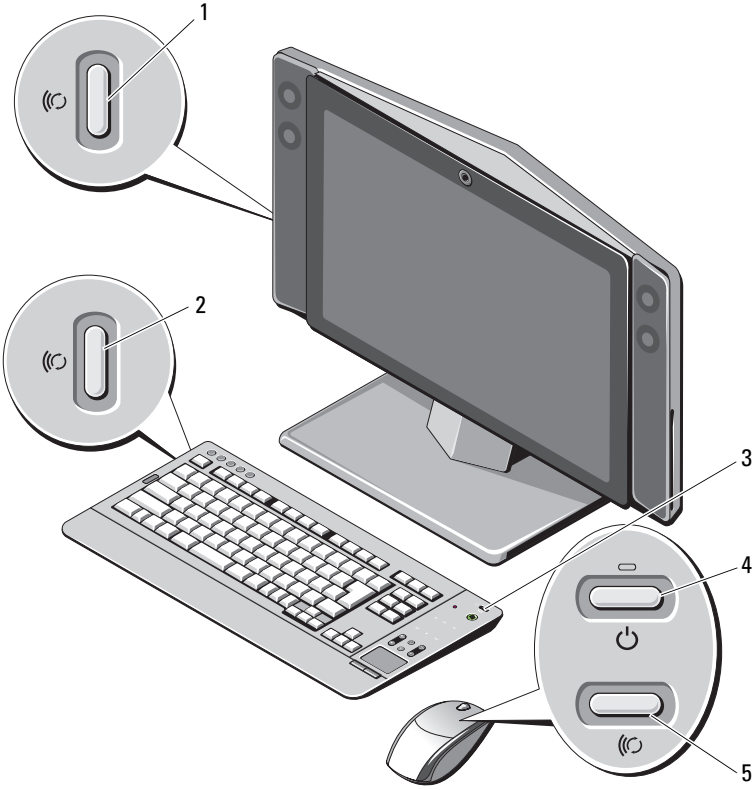
If your computer is running Microsoft Windows Vista™ Operating System:

Click the Windows Vista Start button , click **Control Panel**, and then click **Mouse Properties**.

Re-Syncing Your Optional Wireless Mouse or Keyboard with Your Computer

If for any reason, you need to re-sync your optional (non-Bluetooth) wireless keyboard or mouse with your computer, follow these instructions:

1. Turn the computer on.
2. Turn on the keyboard or mouse.



1 computer sync button
2 keyboard sync button
3 keyboard power switch
4 mouse power button
5 mouse sync button

3 Press the sync button to the rear of your computer's left speaker.

4 Press the sync button on the mouse or keyboard.
The mouse or keyboard should now be paired with your computer. If you experience any problems, see "Troubleshooting" on page 51.

Key Combinations

<Fn> and up-arrow key	Increases brightness on the integrated display.
<Fn> and down-arrow key	Decreases brightness on the integrated display.
<Fn> and right-arrow key	Toggles the display on and off without changing the overall operating state.

To adjust keyboard operation, such as the character repeat rate, open the Control Panel, click **Printers and Other Hardware**, and click **Keyboard**. For information about the Control Panel, see the Windows Help and Support Center. To access the Help and Support Center, see "Windows Help and Support" on page 13.

6

Using the Display

Use the display power button on the lower-right of your display to turn off the display without affecting the operating state of your computer. See "Front View of the Computer" on page 15.

Adjusting Brightness

You can press the following keys to adjust display brightness:

- Press <Fn> and the up-arrow key to increase brightness on the integrated display only (not on an external monitor).
- Press <Fn> and the down-arrow key to decrease brightness on the integrated display only (not on an external monitor).

Making Images and Text Look Bigger or Sharper

NOTE: If you change the display resolution from the current settings, the image may appear blurry or text may be hard to read if you change the resolution to one not supported by your computer and display. Before you change any of the display settings, make a note of the current settings so you can change back to the previous settings if you need to.

You can enhance the legibility of text and change the appearance of images on the screen by adjusting display resolution. As you increase resolution, items appear smaller on the screen. In contrast, lower resolution causes text and images to appear larger and can benefit people with vision impairments. To display a program at a specific resolution, both the video card and the display must support the program, and the necessary video drivers must be installed.

NOTE: Use only the Dell-installed video drivers, which are designed to offer the best performance with your Dell-installed operating system.

If you choose a resolution or color palette that is higher than the display supports, the settings adjust automatically to the closest supported values.

To set the display resolution and refresh rate for your display, perform the steps.

If your computer is running Windows Vista™:

1. Click the Windows Vista Start button , and click **Control Panel**.
2. Under **Appearance and Personalization**, click **Adjust screen resolution**.
3. In the **Display Settings** window, under **Resolution**, slide the slide bar to the left/right to decrease/increase the screen resolution.
4. Click **How do I get the best display?** for further instructions.

7

Cleaning Your Computer

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

Computer and Display

CAUTION: Before you clean your computer, disconnect the computer from the electrical outlet. Clean your computer with a soft cloth dampened with water. Do not use liquid or aerosol cleaners, which may contain flammable substances.

NOTICE: To avoid damaging the computer or display, do not spray cleaning solution directly onto the display. Only use products specifically designed for cleaning displays, and follow the instructions that are included with the product.

NOTE: A soft, lint-free cloth has been provided for your computer in the binder that came with the computer accessory kit.

- Moisten a soft, lint-free cloth with either water or a display cleaner, and wipe the display until it is clean.
- Moisten a soft, lint-free cloth with water and wipe the computer and keyboard. Do not allow water from the cloth to seep between the touch pad and the surrounding palm rest.

CDs and DVDs

CAUTION: Do not clean the disc drive. Any attempt to clean the disc drive itself could result in damage to the drive.

If you notice problems, such as skipping, with the playback quality of your CDs or DVDs, try cleaning the discs.

1. Hold the disc by its outer edge. You can also touch the inside edge of the center hole.

NOTICE: To avoid damaging the surface, do not wipe in a circular motion around the disc.

2 With a soft, lint-free cloth, gently wipe the bottom of the disc (the unlabeled side) in a straight line from the center to the outer edge of the disc.

For stubborn dirt, try using water or a diluted solution of water and mild soap. You can also purchase commercial products that clean discs and provide some protection from dust, fingerprints, and scratches. Cleaning products for CDs are also safe to use on DVDs.

Keyboard and Touch Pad

1 If your keyboard has a power button, turn it off.

2 Remove any installed batteries from the keyboard.

3 Use a can of compressed air to remove dust from between the keys on the keyboard.

⚠ **CAUTION: Clean your touchpad with a soft cloth dampened with water. Do not use liquid or aerosol cleaners, which may contain flammable substances.**

4 Moisten a soft, lint-free cloth with water, and wipe it gently across the surface of the touch pad. Do not allow water from the cloth to seep between the touch pad and the surrounding palm rest or keyboard surface.

8

Troubleshooting

Solving Problems

Follow these tips when you troubleshoot your computer:

- If you added or removed a part before the problem started, review the installation procedures and ensure that the part is correctly installed.
- If a peripheral device does not work, ensure that the device is properly connected.
- If an error message appears on the screen, write down the exact message. This message may help support personnel diagnose and fix the problem(s).
- If an error message occurs in a program, see the program's documentation.

NOTE: The procedures in this document were written for the Windows default view, so they may not apply if you set your Dell™ computer to the Windows Classic view.

Battery Problems

CAUTION: There is a danger of a new battery exploding if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

CONTACT DELL — If you have to repeatedly reset time and date information after turning on the computer, or if an incorrect time or date displays during start-up, contact Dell (see "Contacting Dell" on page 95).

Display Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

The screen is blank or difficult to read

ENSURE THAT THE DISPLAY IS TURNED ON — See "Front View of the Computer" on page 15.

TEST THE ELECTRICAL OUTLET — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

ROTATE THE DISPLAY TO ELIMINATE SUNLIGHT GLARE AND POSSIBLE INTERFERENCE

ADJUST THE WINDOWS DISPLAY SETTINGS —

Windows Vista:

1. Click **Start** → **Control Panel**→ **Hardware and Sound**→ **Personalization**→ **Display Settings**.
2. Adjust **Resolution** and **Colors settings,** as needed.

Drive Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

ENSURE THAT MICROSOFT® WINDOWS® RECOGNIZES THE DRIVE —

Windows Vista™:

- Click the Windows Vista Start button and click **Computer**.

If the drive is not listed, perform a full scan with your antivirus software to check for and remove viruses. Viruses can sometimes prevent Windows from recognizing the drive.

TEST THE DRIVE —

- Insert another disk to eliminate the possibility that the original drive is defective.
- Insert bootable media and restart the computer.

CLEAN THE DRIVE OR DISK — See "" on page 49.

CHECK ANY ACCESSIBLE CABLE CONNECTIONS

RUN THE HARDWARE TROUBLESHOOTER — See "Troubleshooting Software and Hardware Problems in the Microsoft® Windows® Vista™ Operating Systems" on page 78.

RUN THE DELL DIAGNOSTICS — See "Dell Diagnostics" on page 65.

Optical drive problems

NOTE: High-speed optical drive vibration is normal and may cause noise, which does not indicate a defect in the drive or the media.

NOTE: Because of different regions worldwide and different disc formats, not all DVD titles work in all DVD drives.

ADJUST THE WINDOWS VOLUME CONTROL —

- Click the speaker icon in the lower-right corner of your screen.
- Ensure that the volume is turned up by clicking the slidebar and dragging it up.
- Ensure that the sound is not muted by clicking any boxes that are checked.

CHECK THE SPEAKERS — See "Sound and Speaker Problems" on page 62.

Problems writing to an optical drive

CLOSE OTHER PROGRAMS — The optical drive must receive a steady stream of data during the writing process. If the stream is interrupted, an error occurs. Try closing all programs before you write to the optical drive.

TURN OFF STANDBY MODE IN WINDOWS BEFORE WRITING TO A DISC — Search for the keyword *standby* in Windows Help and Support for information on power management modes.

Hard drive problems

RUN CHECK DISK —

Windows Vista:

1 Click **Start** and click **Computer**.

2 Right-click **Local Disk C:**.

3 Click **Properties**→ **Tools**→ **Check Now**.

The **User Account Control** window may appear. If you are an administrator on the computer, click **Continue**; otherwise, contact your administrator to continue the desired action.

4 Follow the instructions on the screen.

E-Mail and Internet Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

NOTE: Do not plug a telephone cable into the network adapter connector (see "Back View of the Computer" on page 17).

CHECK THE MICROSOFT® MAIL SECURITY SETTINGS — If you cannot open your e-mail attachments:

1. In Microsoft Mail, click **Tools**→ **Options**→ **Security**.
2. Click **Do not allow attachments to be saved or opened that could potentially be a virus** or **Block images and other external content in HTML e-mail** to remove the checkmark, as needed.

ENSURE THAT YOU ARE CONNECTED TO THE INTERNET — Ensure that you have subscribed to an Internet provider. With the Microsoft Mail e-mail program open, click **File**. If **Work Offline** has a checkmark next to it, click the checkmark to remove it and connect to the Internet. For help, contact your Internet service provider.

Error Messages

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

If the error message is not listed, see the documentation for the operating system or the program that was running when the message appeared.

A FILENAME CANNOT CONTAIN ANY OF THE FOLLOWING CHARACTERS: \ / : * ? " < > | — Do not use these characters in filenames.

A REQUIRED .DLL FILE WAS NOT FOUND — The program that you are trying to open is missing an essential file. To remove and then reinstall the program:

Windows Vista:

1. Click **Start** → **Control Panel**→ **Programs**→ **Programs and Features**.
2. Select the program you want to remove.
3. Click **Uninstall**.
4. See the program documentation for installation instructions.

***drive letter*:\ IS NOT ACCESSIBLE. THE DEVICE IS NOT READY** — The drive cannot read the disk. Insert a disk into the drive and try again.

INSERT BOOTABLE MEDIA — Insert a bootable floppy disk, CD, or DVD.

NON-SYSTEM DISK ERROR — Remove the floppy disk from the floppy drive and restart your computer.

NOT ENOUGH MEMORY OR RESOURCES. CLOSE SOME PROGRAMS AND TRY AGAIN — Close all windows and open the program that you want to use. In some cases, you may have to restart your computer to restore computer resources. If so, run the program that you want to use first.

OPERATING SYSTEM NOT FOUND — Contact Dell (see "Contacting Dell" on page 95).

IEEE 1394 Device Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

NOTE: Your computer supports only IEEE 1394a standard.

ENSURE THAT THE CABLE FOR THE IEEE 1394 DEVICE IS PROPERLY INSERTED INTO THE DEVICE AND INTO THE CONNECTOR ON THE COMPUTER

ENSURE THAT THE IEEE 1394 DEVICE IS ENABLED IN SYSTEM SETUP — See "System Setup Options" on page 70.

ENSURE THAT THE IEEE 1394 DEVICE IS RECOGNIZED BY WINDOWS —

Windows Vista:

1 Click **Start** → **Control Panel**→ **Hardware and Sound**.

2 Click **Device Manager**.

If your IEEE 1394 device is listed, Windows recognizes the device.

IF YOU HAVE PROBLEMS WITH A DELL IEEE 1394 DEVICE — Contact Dell (see "Contacting Dell" on page 95).

IF YOU HAVE PROBLEMS WITH AN IEEE 1394 DEVICE NOT PROVIDED BY DELL —

Contact the IEEE 1394 device manufacturer.

Keyboard Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

Wireless Keyboard

CHECK THE WIRELESS CONNECTION BETWEEN THE KEYBOARD AND YOUR COMPUTER —

- Ensure that the keyboard is paired with your computer. See "Re-Syncing Your Optional Wireless Mouse or Keyboard with Your Computer" on page 44.
- Verify that the keyboard is turned on, if applicable. Some wireless keyboards have a power button. If the keyboard has a power indicator, check the indicator.
- Ensure that the keyboard battery has not run low, if applicable. If the keyboard has a battery indicator, check the indicator.
- Restart the computer.

USB Keyboard

CHECK THE KEYBOARD CABLE —

- Ensure that the keyboard cable is firmly connected to the computer.
- Shut down the computer, reconnect the keyboard cable as shown on the setup diagram for your computer, and then restart the computer.
- Ensure that the cable is not damaged or frayed and check cable connectors for bent or broken pins. Straighten any bent pins.
- Remove any keyboard extension cables and connect the keyboard directly to the computer.

Any Keyboard

TEST THE KEYBOARD — Connect or pair a properly working keyboard to the computer, then try using the keyboard. See "Re-Syncing Your Optional Wireless Mouse or Keyboard with Your Computer" on page 44.

RUN THE HARDWARE TROUBLESHOOTER — See "Troubleshooting Software and Hardware Problems in the Microsoft® Windows® Vista™ Operating Systems" on page 78.

SEE YOUR KEYBOARD DOCUMENTATION — If your keyboard has documentation, see if it has special troubleshooting suggestions or recommendations.

Lockups and Software Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

The computer does not start up

ENSURE THAT THE POWER CABLE IS FIRMLY CONNECTED TO THE COMPUTER AND TO THE ELECTRICAL OUTLET

The computer stops responding

NOTICE: You may lose data if you are unable to perform an operating system shutdown.

TURN THE COMPUTER OFF — If you are unable to get a response by pressing a key on your keyboard or moving your mouse, press and hold the power button for at least 8 to 10 seconds (until the computer turns off), and then restart your computer.

A program stops responding

END THE PROGRAM —

1. Press <Ctrl><Shift><Esc> simultaneously to access the Task Manager.
2. Click the **Applications** tab.
3. Click to select the program that is no longer responding.
4. Click **End Task**.

A program crashes repeatedly

NOTE: Most software includes installation instructions in its documentation or on a floppy disk, CD, or DVD.

CHECK THE SOFTWARE DOCUMENTATION — If necessary, uninstall and then reinstall the program.

A program is designed for an earlier Windows operating system

RUN THE PROGRAM COMPATIBILITY WIZARD —

Windows Vista:

The Program Compatibility Wizard configures a program so that it runs in an environment similar to non-Windows Vista operating system environments.

1. Click **Start** → **Control Panel**→ **Programs**→ **Use an older program with this version of Windows.**
2. In the welcome screen, click **Next**.
3. Follow the instructions on the screen.

A solid blue screen appears

TURN THE COMPUTER OFF — If you are unable to get a response by pressing a key on your keyboard or moving your mouse, press and hold the power button for at least 8 to 10 seconds (until the computer turns off), and then restart your computer.

Other software problems

CHECK THE SOFTWARE DOCUMENTATION OR CONTACT THE SOFTWARE MANUFACTURER FOR TROUBLESHOOTING INFORMATION —

- Ensure that the program is compatible with the operating system installed on your computer.
- Ensure that your computer meets the minimum hardware requirements needed to run the software. See the software documentation for information.
- Ensure that the program is installed and configured properly.

- Verify that the device drivers do not conflict with the program.
- If necessary, uninstall and then reinstall the program.

BACK UP YOUR FILES IMMEDIATELY

USE A VIRUS-SCANNING PROGRAM TO CHECK THE HARD DRIVE, FLOPPY DISKS, CDS, OR DVDS

SAVE AND CLOSE ANY OPEN FILES OR PROGRAMS AND SHUT DOWN YOUR COMPUTER THROUGH THE START MENU

Memory Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

IF YOU RECEIVE AN INSUFFICIENT MEMORY MESSAGE —

- Save and close any open files and exit any open programs you are not using to see if that resolves the problem.
- See the software documentation for minimum memory requirements. If necessary, install additional memory (see "Contacting Dell" on page 95).
- Run the Dell Diagnostics (see "Dell Diagnostics" on page 65).

IF YOU EXPERIENCE OTHER MEMORY PROBLEMS —

- Ensure that the memory you are using is supported by your computer. For more information about the type of memory supported by your computer, see "Specifications" on page 83.
- Run the Dell Diagnostics (see "Dell Diagnostics" on page 65).

Mouse Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

Wireless Mouse

CHECK THE WIRELESS CONNECTION BETWEEN THE MOUSE AND YOUR COMPUTER —

- Ensure that the mouse is paired with your computer. See "Re-Syncing Your Optional Wireless Mouse or Keyboard with Your Computer" on page 44.
- Verify that the mouse is turned on. Some mice include a power indicator.
- Ensure that the mouse battery has not run low. Some mice include a battery-charge indicator.

- Restart your computer.
- See your mouse documentation.

TO VERIFY THAT THE PROBLEM IS WITH THE MOUSE, CHECK THE TOUCH PAD —

1 Turn off the mouse.

2 At the Windows desktop, use the touch pad to move the cursor around, select an icon, and open it.

If the touch pad operates correctly, the mouse may be defective.

USB Mouse

CHECK THE MOUSE CABLE —

- Ensure that neither the cable or the cable connectors are visibly damaged.
- Remove any mouse extension cables, and connect the mouse directly to the computer.
- Verify that the mouse cable is connected as shown on the setup diagram for your computer.

RESTART THE COMPUTER —

1 Simultaneously press <Ctrl><Esc> to display the **Start** menu.

2 Press <u>, press the up- and down-arrow keys to highlight **Shut down** or **Turn Off**, and then press <Enter>.

3 After the computer turns off, reconnect the mouse cable as shown on the setup diagram.

4 Turn on the computer.

TO VERIFY THAT THE PROBLEM IS WITH THE MOUSE, CHECK THE TOUCH PAD —

1 Shut down the computer.

2 Disconnect the mouse.

3 Turn on the computer.

4 At the Windows desktop, use the touch pad to move the cursor around, select an icon, and open it.

5 If the touch pad operates correctly, the mouse may be defective.

Any Mouse

TEST THE MOUSE — Connect a properly working mouse to the computer, then try using the mouse.

CHECK THE MOUSE SETTINGS —

Windows Vista:

1 Click **Start** → **Control Panel**→ **Hardware and Sound**→ **Mouse**.

2 Adjust the settings as needed.

REINSTALL THE MOUSE DRIVER — See (see "Drivers" on page 75).

RUN THE HARDWARE TROUBLESHOOTER — See "Troubleshooting Software and Hardware Problems in the Microsoft® Windows® Vista™ Operating Systems" on page 78.

Network Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

CHECK THE NETWORK CABLE CONNECTOR — Ensure that the network cable is firmly inserted into the network connector on the back of the computer and the network jack.

CHECK THE NETWORK LIGHTS ON THE BACK OF THE COMPUTER — If the link integrity light is off (see "Controls and Lights" on page 87), no network communication is occurring. Replace the network cable.

RESTART THE COMPUTER AND LOG ON TO THE NETWORK AGAIN

CHECK YOUR NETWORK SETTINGS — Contact your network administrator or the person who set up your network to verify that your network settings are correct and that the network is functioning.

RUN THE HARDWARE TROUBLESHOOTER — See "Troubleshooting Software and Hardware Problems in the Microsoft® Windows® Vista™ Operating Systems" on page 78.

Power Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

IF THE POWER LIGHT IS BLUE AND THE COMPUTER IS NOT RESPONDING —

Contact Dell, see "Contacting Dell" on page 95.

IF THE POWER LIGHT IS BLINKING BLUE — The computer is in standby mode. Press a key on the keyboard, move the mouse, or press the power button to resume normal operation.

IF THE POWER LIGHT IS OFF — The computer is either turned off or is not receiving power.

- Reseat the power cable in the power connector on the back of the computer and the electrical outlet.
- Bypass power strips, power extension cables, and other power protection devices to verify that the computer turns on properly.
- Ensure that any power strips being used are plugged into an electrical outlet and are turned on.
- Ensure that the electrical outlet is working by testing it with another device, such as a lamp.
- Contact Dell, (see "Contacting Dell" on page 95).

IF THE POWER LIGHT IS AMBER — Contact Dell, see "Contacting Dell" on page 95.

ELIMINATE INTERFERENCE — Some possible causes of interference are:

- Power, keyboard, and mouse extension cables.
- Too many devices connected to the same power strip.
- Multiple power strips connected to the same electrical outlet.

Printer Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

NOTE: If you need technical assistance for your printer, contact the printer's manufacturer.

CHECK THE PRINTER DOCUMENTATION — See the printer documentation for setup and troubleshooting information.

ENSURE THAT THE PRINTER IS TURNED ON

CHECK THE PRINTER CABLE CONNECTIONS —

- See the printer documentation for cable connection information.
- Ensure that the printer cables are securely connected to the printer and the computer.

TEST THE ELECTRICAL OUTLET — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

VERIFY THAT THE PRINTER IS RECOGNIZED BY WINDOWS —

Windows Vista:

1 Click **Start** → **Control Panel**→ **Hardware and Sound**→ **Printer**.

2 If the printer is listed, right-click the printer icon.

3 Click **Properties** and click **Ports**.

4 Adjust the settings, as needed.

REINSTALL THE PRINTER DRIVER — See the printer documentation for information on reinstalling the printer driver.

Scanner Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

NOTE: If you need technical assistance for your scanner, contact the scanner's manufacturer.

CHECK THE SCANNER DOCUMENTATION — See the scanner documentation for setup and troubleshooting information.

UNLOCK THE SCANNER — Ensure that your scanner is unlocked (if the scanner has a locking tab or button).

RESTART THE COMPUTER AND TRY THE SCANNER AGAIN

CHECK THE CABLE CONNECTIONS —

- See the scanner documentation for information on cable connections.
- Ensure that the scanner cables are securely connected to the scanner and the computer.

VERIFY THAT THE SCANNER IS RECOGNIZED BY MICROSOFT WINDOWS —

Windows Vista:

1 Click **Start** → **Control Panel**→ **Hardware and Sound**→ **Scanners and Cameras**.

2 If the scanner is listed, Windows recognizes the scanner.

REINSTALL THE SCANNER DRIVER — See the scanner documentation for instructions.

Sound and Speaker Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

No sound from integrated speakers

ADJUST THE WINDOWS VOLUME CONTROL — Double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and that the sound is not muted. Adjust the volume, bass, or treble controls to eliminate distortion.

REINSTALL THE AUDIO DRIVER — See "Reinstalling Drivers and Utilities" on page 76.

DISCONNECT HEADPHONES FROM THE HEADPHONE CONNECTOR — Sound from the speakers is automatically disabled when headphones are connected to the computer's side-panel headphone connector.

No sound from external speakers

NOTE: The volume control in MP3 and other media players may override the Windows volume setting. Always check to ensure that the volume on the media player(s) has not been turned down or off.

CHECK THE SPEAKER CABLE CONNECTIONS — Ensure that the speakers are connected as shown on the setup diagram supplied with the speakers.

ENSURE THAT THE SPEAKERS ARE TURNED ON — See the setup diagram supplied with the speakers. If your speakers have volume controls, adjust the volume, bass, or treble to eliminate distortion.

ADJUST THE WINDOWS VOLUME CONTROL — Click or double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and that the sound is not muted.

DISCONNECT HEADPHONES FROM THE HEADPHONE CONNECTOR — Sound from the speakers is automatically disabled when headphones are connected to the computer's side-panel headphone connector.

TEST THE ELECTRICAL OUTLET — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

ELIMINATE POSSIBLE INTERFERENCE — Turn off nearby fans, fluorescent lights, or halogen lamps to check for interference.

RUN THE SPEAKER DIAGNOSTICS — See "Dell Diagnostics" on page 65.

REINSTALL THE AUDIO DRIVER — See "Drivers" on page 75.

RUN THE HARDWARE TROUBLESHOOTER — See "Troubleshooting Software and Hardware Problems in the Microsoft® Windows® Vista™ Operating Systems" on page 78.

No sound from headphones

CHECK THE HEADPHONE CABLE CONNECTION — Ensure that the headphone cable is securely inserted into the headphone connector (see "Front View of the Computer" on page 15).

ADJUST THE WINDOWS VOLUME CONTROL — Click or double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and that the sound is not muted.

Touch Pad Problems

CHECK THE TOUCH PAD SETTINGS —

1 Click **Start** → **Control Panel**→ **Printers and Other Hardware**→ **Mouse**.

2 Try adjusting the settings.

TO VERIFY THAT THE PROBLEM IS WITH THE TOUCH PAD, CHECK THE MOUSE —

See "Mouse Problems" on page 58.

REINSTALL THE TOUCH PAD DRIVER — See "Reinstalling Drivers and Utilities" on page 76.

9

Dell Diagnostics

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

When to Use the Dell Diagnostics

If you experience a problem with your computer, perform the checks in Lockups and Software Problems (see "Lockups and Software Problems" on page 56) and run the Dell Diagnostics before you contact Dell for technical assistance.

It is recommended that you print these procedures before you begin, if working from the electronic version of the document.

NOTICE: The Dell Diagnostics works only on Dell™ computers.

See "System Setup" on page 69 on page to review your computer's configuration information, and ensure that the device that you want to test displays in the system setup program and is active.

Start the Dell Diagnostics from your hard drive or from the *Drivers and Utilities* media.

Starting the Dell Diagnostics From Your Hard Drive

The Dell Diagnostics is located on a hidden diagnostic utility partition on your hard drive.

NOTE: If your computer cannot display a screen image, see "Contacting Dell" on page 95.

1. Ensure that the computer is connected to an electrical outlet that is known to be working properly.
2. Turn on (or restart) your computer.

3 When the DELL™ logo appears, press <F12> immediately. Select **Diagnostics** from the boot menu and press <Enter>.

NOTE: If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft® Windows® desktop; then, shut down your computer and try again.

NOTE: If you see a message stating that no diagnostics utility partition has been found, run the Dell Diagnostics from the *Drivers and Utilities* media.

4 Press any key to start the Dell Diagnostics from the diagnostics utility partition on your hard drive.

Starting the Dell Diagnostics From the Drivers and Utilities Media

1 Insert the *Drivers and Utilities* media.

2 Shut down and restart the computer.

When the DELL logo appears, press <F12> immediately.

NOTE: If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft® Windows® desktop; then, shut down your computer and try again.

NOTE: The next steps change the boot sequence for one time only. On the next start-up, the computer boots according to the devices specified in the system setup program.

3 When the boot device list appears, highlight **CD/DVD/CD-RW** and press <Enter>.

4 Select the **Boot from CD-ROM** option from the menu that appears and press <Enter>.

5 Type `1` to start the CD menu and press <Enter> to proceed.

6 Select **Run the 32 Bit Dell Diagnostics** from the numbered list. If multiple versions are listed, select the version appropriate for your computer.

7 When the Dell Diagnostics **Main Menu** appears, select the test you want to run.

Dell Diagnostics Main Menu

1 After the Dell Diagnostics loads and the **Main Menu** screen appears, click the button for the option you want.

NOTE: It is recommended that you select **Test System** to run a complete test on your computer.

Option	Function
Test Memory	Run the stand-alone memory test
Test System	Run System Diagnostics
Exit	Exit the Diagnostics

2 After you have selected the **Test System** option from the main menu, the following menu appears:

NOTE: It is recommended that you select **Extended Test** from the menu below to run a more thorough check of devices in the computer.

Option	Function
Express Test	Performs a quick test of devices in the system. This typically can take 10 to 20 minutes.
Extended Test	Performs a thorough check of devices in the system. This typically can take an hour or more.
Custom Test	Use to test a specific device or customize the tests to be run.
Symptom Tree	This option allows you to select tests based on a symptom of the problem you are having. This option lists the most common symptoms.

3 If a problem is encountered during a test, a message appears with an error code and a description of the problem. Write down the error code and problem description and see "Contacting Dell" on page 95.

NOTE: The Service Tag for your computer is located at the top of each test screen. If you contact Dell, technical support will ask for your Service Tag.

4 If you run a test from the **Custom Test or Symptom Tree** option, click the applicable tab described in the following table for more information.

Tab	Function
Results	Displays the results of the test and any error conditions encountered.
Errors	Displays error conditions encountered, error codes, and the problem description.
Help	Describes the test and may indicate requirements for running the test.
Configuration	Displays your hardware configuration for the selected device. The Dell Diagnostics obtains configuration information for all devices from system setup, memory, and various internal tests, and it displays the information in the device list in the left pane of the screen. The device list may not display the names of all the components installed on your computer or all devices attached to your computer.
Parameters	Allows you to customize the test by changing the test settings.

5 When the tests are complete, close the test screen to return to the **Main Menu** screen. To exit the Dell Diagnostics and restart the computer, close the **Main Menu** screen.

6 Remove the *Drivers and Utilities* media (if applicable).

10

System Setup

Overview

Use System Setup as follows:

- To change the system configuration information after you add, change, or remove any hardware in your computer
- To set or change a user-selectable option such as the user password
- To read the current amount of memory or set the type of hard drive installed

Before you use System Setup, it is recommended that you write down the System Setup screen information for future reference.

NOTICE: Unless you are an expert computer user, do not change the settings for this program. Certain changes can make your computer work incorrectly.

Entering System Setup

1. Turn on (or restart) your computer.
2. When the blue DELL™ logo is displayed, you must watch for the F2 prompt to appear.
3. Once the F2 prompt appears, press <F2> immediately.

NOTE: The F2 prompt indicates that the keyboard has initialized. This prompt can appear very quickly, so you must watch for it to display, and then press <F2>. If you press <F2> before you are prompted, this keystroke will be lost.

4. If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft® Windows® desktop. Then, shut down your computer and try again.

System Setup Screen

The System Setup screen displays current or changeable configuration information for your computer. Information on the screen is divided into three areas: the menu, the main window, the Help and key functions field.

Options List — The tabbed options contain features that define the configuration of your computer, including installed hardware, power conservation, and security features.

Option Field — This field contains information about each option. In this field you can view your current settings and make changes to your settings. Use the right- and left-arrow keys to highlight an option. Press <Enter> to make that selection active.

Help — This field provides context sensitive help based on the options selected.
Key Functions — This field lists keys and their functions within the active System Setup field.

System Setup Options

NOTE: Depending on your computer and installed devices, the items listed in this section may not appear, or may not appear exactly as listed.

Main	
System Date	Displays the system date.
System Time	Displays the system time.
SATA0, SATA1	Displays the currently installed drives, vendor, and size (hard drives only).
HDD S.M.A.R.T. capability (Disabled default)	Enables/disables integrated drive errors to be reported during system startup.
System Info	Displays **BIOS Info**, **System Info,** and the **Service Tag** **NOTE:** The system name listed in the BIOS may not appear exactly as the name that appears on the computer or in the computer's documentation.
Memory Info	Displays **Installed Memory**, **Usable Memory, Memory Speed, Memory Channel Mode,** and **Memory Technology.**

Advanced	
CPU Type	Displays the **Type of Processor** installed in the system.
CPU Speed	Displays CPU Speed.
Cache L1, L2	Displays the amount of Cache RAM available.
Integrated peripherals (**enabled** default)	Displays information about **Serial ATA Configurations,** and enables/disables **Serial ATA Configuration**, **HD Audio**, **Onboard LAN** and **Onboard LAN Boot ROM**.
PnP/PCI Configurations (**PEG/IGD** default)	Permits selection of a primary graphics controller.
CPU Configuration (**Enabled** default)	Enables/disables **Intel SpeedStep® technology**. When **Enabled** is selected, CPU speed is controlled by the OS. When disabled, the default CPU speed is used.
USB Configuration (**Enabled** default)	Enables/disables the **USB controller.**

Power Management	
ACPI Suspend Type (S3 default)	Sets the computer's suspend mode. The options are **S1**, a suspend state in which the computer is running in a low-power mode, and **S3**, a suspend state in which the power is reduced or turned off for many components, however, system memory remains active.
Remote Wakeup (Off default)	This option allows the system to power up when a network interface controller receives a wake up signal.
Auto Power On (**disabled** default)	Enables/disables the **Auto Power On** function.

Auto Power On Date (**Every Day** default)	Sets the computer to automatically turn on. **Every Day** turns the computer on every day at the time set in **Auto Power Time**. **1-31** allows you to select a specific day of the month. **NOTE:** This feature does not work if you turn off your computer using the switch on a power strip or surge protector or if **Auto Power On** is set to **disabled**.
Auto Power On Time (00:00:00 default)	Sets time to automatically turn on the computer. Time is kept in the standard 24-hour format (*hours:minutes:seconds*). Change the startup time by pressing the right- or left-arrow key to increase or decrease the numbers, or type numbers in both the date and time fields. **NOTE:** This feature does not work if you turn off your computer using the switch on a power strip or surge protector or if **Auto Power On** is set to **disabled**.
AC Recovery (**Power Off** default)	Determines how the system responds when AC power is re-applied after a power loss. **Power Off** commands the system to stay off when the power is re-applied. You must press the front-panel power button before the system turns on. **Power On** commands the system to turn on when the power is re-applied. **Last State** commands the system to return to the last power state the system was in just before it was turned off.

BOOT	
Boot Device Priority Hard Disk Boot Priority CD/DVD Boot Priority Other Boot Priority	Displays the boot device properties for all the bootable devices present on the system. It offers options for setting **Boot Device Priority, Hard Disk Boot Priority**, **CD/DVD Boot Priority**, **Boot Setting Configurations**, and **Security**.
Boot Settings Configuration	Enables/disables **Fast Boot** and **Numlock Key**.

Exit	
Exit options	Provides options to **Save Changes & Exit**, **Discard Changes and Exit**, **Load Optimal Defaults** or **Discard Changes**.

Boot Sequence

This feature allows you to change the Boot Device Property for devices.

Option Settings

- **Hard Disk —** The computer attempts to boot from the hard drive.
- **Removable** — The computer attempts to boot from a removable device, such as a USB key.
- **CD/DVD** — The computer attempts to boot from the disc drive.

Changing the Boot Sequence for the Current Boot

You can use this feature, for example, to restart your computer to a USB device, such as a floppy drive, memory key, or optical drive.

1. If you are booting to a USB device, connect the USB device to a USB connector.
2. Turn on (or restart) your computer.
3. When `F2 = Setup, F12 = Boot Menu` appears in the upper-right corner of the screen, press <F12>.

   If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft Windows desktop, then shut down your computer and try again.
4. The **Boot Menu** appears, listing all available boot devices.
5. Use the arrow keys to select the appropriate device (for the current boot only).

NOTE: To boot to a USB device, the device must be bootable. To ensure that a device is bootable, check the device documentation.

Changing the Boot Sequence for Future Boots

1. Enter System Setup (see "Entering System Setup" on page 69).
2. Press the left- and right-arrow keys to highlight the Boot tab.
3. Press the up- and down-arrow keys to highlight the appropriate Boot Device Property, then press <Enter>.
4. Press the up- and down-arrow keys to highlight the item you want to change, and then press <Enter>.
5. Press the up- and down-arrow keys to select the boot device you want to change, and then press <Enter>.
6. Press <F10> and then press <Enter> to exit System Setup and resume the boot process.

11

Reinstalling Software

Drivers

What Is a Driver?

A driver is a program that controls a device such as a printer, mouse, or keyboard. All devices require a driver program.

A driver acts like a translator between the device and any other programs that use the device. Each device has its own set of specialized commands that only its driver recognizes.

Dell ships your computer to you with required drivers already installed—no further installation or configuration is needed.

NOTICE: The *Drivers and Utilities* media may contain drivers for operating systems that are not on your computer. Ensure that you are installing software appropriate for your operating system.

Many drivers, such as the keyboard driver, come with your Microsoft Windows operating system. You may need to install drivers if you:

- Upgrade your operating system.
- Reinstall your operating system.
- Connect or install a new device.

Identifying Drivers

If you experience a problem with any device, identify whether the driver is the source of your problem and, if necessary, update the driver.

If your computer is running Microsoft Windows Vista™:

1. Click the Windows Vista Start button , and right-click **Computer**.
2. Click **Properties**→ **Device Manager**.

   NOTE: The **User Account Control** window may appear. If you are an administrator on the computer, click **Continue**; otherwise, contact your administrator to continue.

Scroll down the list to see if any device has an exclamation point (a yellow circle with a [!]) on the device icon.

If an exclamation point is next to the device name, you may need to reinstall the driver or install a new driver (see "Reinstalling Drivers and Utilities" on page 76).

Reinstalling Drivers and Utilities

NOTICE: The Dell Support website at **support.dell.com** and your *Drivers and Utilities* media provide approved drivers for Dell™ computers. If you install drivers obtained from other sources, your computer might not work correctly.

Using Windows Device Driver Rollback

If a problem occurs on your computer after you install or update a driver, use Windows Device Driver Rollback to replace the driver with the previously installed version.

If your computer is running Windows Vista:

1. Click the Windows Vista Start button , and right-click **Computer**.
2. Click **Properties**→ **Device Manager**.

   NOTE: The **User Account Control** window may appear. If you are an administrator on the computer, click **Continue**; otherwise, contact your administrator to enter the Device Manager.
3. Right-click the device for which the new driver was installed and click **Properties**.
4. Click the **Drivers** tab→ **Roll Back Driver**.

If Device Driver Rollback does not resolve the problem, then use System Restore (see "Restoring Your Operating System" on page 78) to return your computer to the operating state that existed before you installed the new driver.

1. With the Windows desktop displayed, insert the *Drivers and Utilities* media.

   If this is your first time to use the *Drivers and Utilities* media, go to step 2. If not, go to step 5.

2. When the *Drivers and Utilities* media installation program starts, follow the prompts on the screen.
3. When the **InstallShield Wizard Complete** window appears, remove the *Drivers and Utilities* media and click **Finish** to restart the computer.
4. When you see the Windows desktop, reinsert the *Drivers and Utilities* media.
5. At the **Welcome Dell System Owner** screen, click **Next**.

NOTE: The *Drivers and Utilities* media displays drivers only for hardware that came installed in your computer. If you installed additional hardware, the drivers for the new hardware might not be displayed by the *Drivers and Utilities* media. If those drivers are not displayed, exit the *Drivers and Utilities* program. For drivers information, see the documentation that came with the device.

A message stating that the *Drivers and Utilities* media is detecting hardware in your computer appears.

The drivers that are used by your computer are automatically displayed in the **My Drivers—The** *Drivers and Utilities* **media has identified these components in your system** window.

6. Click the driver that you want to reinstall and follow the instructions on the screen.

   If a particular driver is not listed, then that driver is not required by your operating system.

Troubleshooting Software and Hardware Problems in the Microsoft® Windows® Vista™ Operating Systems

If a device is either not detected during the operating system setup or is detected but incorrectly configured, you can use the Hardware Troubleshooter to resolve the incompatibility.

To start the Hardware Troubleshooter:

1. Click the Windows Vista Start button , and click **Help and Support.**
2. Type `hardware troubleshooter` in the search field and press <Enter> to start the search.
3. In the search results, select the option that best describes the problem and follow the remaining troubleshooting steps.

Restoring Your Operating System

You can restore your Windows Vista operating system in the following ways:

- System Restore returns your computer to an earlier operating state without affecting data files. Use System Restore as the first solution for restoring your operating system and preserving data files.
- Dell Factory Image Restore returns your hard drive to the operating state it was in when you purchased the computer. It permanently deletes all data on the hard drive and removes any programs installed after you received the computer. Use Dell Factory Image Restore only if System Restore did not resolve your operating system problem.
- If you received an *Operating System* disc with your computer, you can use it to restore your operating system. However, using the *Operating System* disc also deletes all data on the hard drive. Use the disc *only* if System Restore did not resolve your operating system problem.

Using Microsoft Windows System Restore

The Windows operating system provides a System Restore option which allows you to return your computer to an earlier operating state (without affecting data files) if changes to the hardware, software, or other system

settings have left the computer in an undesirable operating state. Any changes that System Restore makes to your computer are completely reversible.

NOTICE: Make regular backups of your data files. System Restore does not monitor your data files or recover them.

NOTE: The procedures in this document were written for the Windows default view, so they may not apply if you set your Dell™ computer to the Windows Classic view.

Starting System Restore

NOTICE: Before you restore the computer to an earlier operating state, save and close any open files and exit any open programs. Do not alter, open, or delete any files or programs until the system restoration is complete.

If your computer is running Windows Vista:

1. Click **Start**.
2. In the Start Search box, type `System Restore` and press <Enter>.

   NOTE: The **User Account Control** window may appear. If you are an administrator on the computer, click **Continue**; otherwise, contact your administrator to continue the desired action.
3. Click **Next** and follow the remaining prompts on the screen.

In the event that System Restore did not resolve the issue, you may undo the last system restore.

Undoing the Last System Restore

NOTICE: Before you undo the last system restore, save and close all open files and exit any open programs. Do not alter, open, or delete any files or programs until the system restoration is complete.

If your computer is running Windows Vista:

1. Click **Start**.
2. In the Start Search box, type `System Restore` and press <Enter>.
3. Click **Undo my last restoration** and click **Next**.

Using Dell™ Factory Image Restore

NOTICE: Using Dell Factory Image Restore permanently deletes all data on the hard drive and removes any programs or drivers installed after you received your computer. If possible, back up the data before using these options. Use Factory Image Restore only if System Restore did not resolve your operating system problem.

NOTE: Dell Factory Image Restore may not be available in certain countries or on certain computers.

Use Dell Factory Image Restore (in Windows Vista) only as the last method to restore your operating system. These options restore your hard drive to the operating state it was in when you purchased the computer. Any programs or files added since you received your computer—including data files—are permanently deleted from the hard drive. Data files include documents, spreadsheets, e-mail messages, digital photos, music files, and so on. If possible, back up all data before using PC Restore or Factory Image Restore.

Windows Vista: Dell Factory Image Restore

1. Turn on the computer. When the Dell logo appears, press <F8> several times to access the Vista Advanced Boot Options Window.
2. Select **Repair Your Computer**.

   The System Recovery Options window appears.
3. Select a keyboard layout and click **Next**.
4. To access the recovery options, log on as a local user. To access the command prompt, type `administrator` in the User name field, then click **OK**.
5. Click **Dell Factory Image Restore**.

   NOTE: Depending upon your configuration, you may need to select **Dell Factory Tools**, then **Dell Factory Image Restore**.

   The Dell Factory Image Restore welcome screen appears.
6. Click **Next**.

   The Confirm Data Deletion screen appears.

NOTICE: If you do not want to proceed with Factory Image Restore, click **Cancel**.

7 Click the checkbox to confirm that you want to continue reformatting the hard drive and restoring the system software to the factory condition, then click **Next**.

The restore process begins and may take five or more minutes to complete. A message appears when the operating system and factory-installed applications have been restored to factory condition.

8 Click **Finish** to reboot the system.

Using the Operating System Media

Before you Begin

If you are considering reinstalling the Windows operating system to correct a problem with a newly installed driver, first try using Windows Device Driver Rollback. See "Using Windows Device Driver Rollback" on page 76. If Device Driver Rollback does not resolve the problem, then use System Restore to return your operating system to the operating state it was in before you installed the new device driver. See "Using Microsoft Windows System Restore" on page 78.

NOTICE: Before performing the installation, back up all data files on your primary hard drive. For conventional hard drive configurations, the primary hard drive is the first drive detected by the computer.

To reinstall Windows, you need the following items:

- Dell™ *Operating System* media
- Dell *Drivers and Utilities* media

NOTE: The *Drivers and Utilities* media contains drivers that were installed during the assembly of the computer. Use the *Drivers and Utilities* media to load any required drivers. Depending on the region from which you ordered your computer, or whether you requested the media, the *Drivers and Utilities* media and *Operating System* media may not ship with your computer.

Reinstalling Windows Vista

The reinstallation process can take 1 to 2 hours to complete. After you reinstall the operating system, you must also reinstall the device drivers, virus protection program, and other software.

NOTICE: The *Drivers and Utilities* media provides options for reinstalling Windows Vista. The options can overwrite files and possibly affect programs that are installed on your hard drive. Therefore, do not reinstall Windows Vista unless a Dell technical support representative instructs you to do so.

1. Save and close any open files and exit any open programs.
2. Insert the *Operating System* disc.
3. Click **Exit** if the `Install Windows` message appears.
4. Restart the computer.

   When the DELL logo appears, press <F12> immediately.

   NOTE: If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft® Windows® desktop; then, shut down your computer and try again.

   NOTE: The next steps change the boot sequence for one time only. On the next start-up, the computer boots according to the devices specified in the system setup program.
5. When the boot device list appears, highlight **CD/DVD** and press <Enter>.
6. Press any key to **Boot from CD-ROM**.
7. Follow the instructions on the screen to complete the installation.

12

Specifications

NOTE: Offerings may vary by region. For more information regarding the configuration of your computer, click **Start** → **Help and Support** and select the option to view information about your computer.

Processor	
Microprocessor types	Select Intel® Core™ 2 Duo, Intel® Pentium® D, and Intel®Celeron® processors
Cache	at least 512K (dependent upon processor choice)

System Information	
Northbridge	Intel G33
Southbridge	ICH9DH
Data bus width	64 bits
Address bus width	32 bits
DMA channels	eight
Interrupt levels	24
BIOS chip (NVRAM)	8 Mb
Memory speed	667/800 MHz
System bus frequency	800-, 1066-,or 1333-MHz data rate (depending on your processor)

Controller	
Hard drive	integrated serial ATA

Memory	
Type	667-MHz and 800-MHz non-ECC DDR2 SDRAM **NOTE:** Your computer does not support registered, ECC, or buffered memory.
Memory connectors	two
Memory capacities	1 GB, or 2 GB
Minimum memory	1 GB
Maximum memory	4 GB
BIOS address	F0000h

Drives and Devices	
Drives	one 3.5-inch hard-drive, one slim-line slot-load 5.25-inch disc drive
Available devices	serial ATA hard drive, Media Card Reader, USB memory devices, DVD and CD-RW combo drive, DVD+/- RW, Blu-Ray™

Ports and Connectors	
External connectors:	
IEEE 1394a	side-panel: one 4-pin mini-connector back-panel: one 6-pin connector
Network adapter	RJ45 connector
USB 2.0	two side-panel, and four back-panel connectors
Audio	two side-panel connectors for microphone/line-in and headphones/line-out; two back-panel connectors for S/PDIF digital audio out, and 2.0 audio out

Ports and Connectors *(continued)*	
Additional connectors/components available with optional TV tuner	**back-panel:** TV-in connector, special 10-pin connector for optional TV input device **optional TV input device:** S-video, composite video, left audio, and right audio connectors; IR blaster
Video	
Type	Integrated Intel GMA 3100 or ATI Mobility Radeon™ HD 2400
LCD interface	LVDS
With optional TV tuner card only: TV support	dependent upon region: **NTSC/ATSC:** NTSC supported in RF, S-video, and composite modes. ATSC supported in RF mode. **PAL/SECAM/DVB-T:** PAL/SECAM supported in RF, S-video, and composite modes. DVB-T supported in RF mode. or **NTSC/ISDB-T:** NTSC supported in RF, S-video, and composite modes. ISDB-T supported in RF mode.
Audio	
Type	integrated stereo High Definition Audio codec
Stereo conversion	20-bit analog-to-digital; 24-bit digital-to-analog
Speaker	two 5W, 140Hz speakers
Power rating	stereo 5W per channel with Class D amplification
Frequency response	140 Hz to 18,000 Hz

Audio *(continued)*	
Volume controls	keyboard shortcuts, program menus, media control buttons on front of display and optional optimized wireless keyboard
Communications	
NIC	Integrated network interface capable of 10/100/1000-Mbps communication: • Green — A good connection exists between a 10-Mbps network and the computer. • Orange — A good connection exists between a 100-Mbps network and the computer. • Yellow — A good connection exists between a 1000-Mbps (1-Gb) network and the computer. • Off — The computer is not detecting a physical connection to the network.
Wireless	802.11 a/b/g/n support Bluetooth wireless technology
Display	
Type (active-matrix TFT)	WSXGA
Maximum resolution:	1680 x 1050 at 16.7 million colors
Brightness (maximum)	300 nits
Response time (typical)	5-ms
Contrast Ratio	1000:1
Operating angle	5° forward to 25° back
Viewing angles:	
Horizontal	80°
Vertical	80°

Display *(continued)*	
Controls	brightness can be controlled through keyboard shortcuts if you are using the optional wireless keyboard optimized for use with your computer (see "Key Combinations" on page 46)

Controls and Lights	
Power control	push button
Power light	blue light — low-illumination blue in sleep state; solid blue for power-on state amber light — indicates a boot failure
Display power light	blue
Hard-drive access light	blue
Media control buttons	blue — light up when the user's hand is detected in the near vicinity
Link integrity light (on integrated network adapter and on front panel)	back panel integrated network adapter: green light for 10-Mb operation; orange light for 100-Mb operation; yellow light for a 1000-Mb (1-Gb) operation
Activity light (on integrated network adapter)	yellow blinking light when there is network activity

Power	
Power supply:	
Wattage	200 W
Heat dissipation	682 BTU/hr **NOTE:** Heat dissipation is calculated based upon the power supply wattage rating.
Voltage	90 - 264 V at 50/60 Hz
Backup battery	3-V CR2032 lithium coin cell

Physical	
Approximate height	15.9 inch (40.5 cm)
Approximate width	23.5 inch (59.7 cm)
Approximate depth (without cords or stand)	3.3 inch (8.38 cm)
Approximate depth with stand installed	7.3 inch (18.5 cm)
Approximate weight (typical)	28.2 lb (12.8 kg)

Environmental	
Temperature:	
Operating	10° to 35°C (50° to 95°F)
Storage	–40° to 65°C (–40° to 149°F)
Relative humidity	20% to 80% (noncondensing)
Maximum vibration:	
Operating	0.26 Grms random for 2 min in all operational orientations
Storage	2.2 Grms random for 15 min
Maximum shock:	
Operating	Half-Sine Pulse: 40G for 2ms with a change in velocity of 20 in/s (51cm/s)
Storage	Half-Sine Pulse: 40G for 22ms with a change in velocity of 240 in/s (609 cm/s)
Altitude:	
Operating	–15.2 to 3048 m (–50 to 10,000 ft)
Storage	–15.2 to 10,668 m (–50 to 35,000 ft)

13

Getting Help

Obtaining Assistance

If you experience a problem with your computer, you can complete the following steps to diagnose and troubleshoot the problem:

1. See "Troubleshooting" on page 51 for information and procedures that pertain to the problem your computer is experiencing.
2. See "Dell Diagnostics" on page 65 for procedures on how to run Dell Diagnostics.
3. Fill out the "Diagnostics Checklist" on page 94.
4. Use Dell's extensive suite of online services available at Dell Support (**support.dell.com**) for help with installation and troubleshooting procedures. See "Online Services" on page 90 for a more extensive list of Dell Support online.
5. If the preceding steps have not resolved the problem, see "Contacting Dell" on page 95.

NOTE: Call Dell Support from a telephone near or at the computer so that the support staff can assist you with any necessary procedures.

NOTE: Dell's Express Service Code system may not be available in all countries.

When prompted by Dell's automated telephone system, enter your Express Service Code to route the call directly to the proper support personnel. If you do not have an Express Service Code, open the **Dell Accessories** folder, double-click the **Express Service Code** icon, and follow the directions.

For instructions on using Dell Support, see "Technical Support and Customer Service" on page 90.

NOTE: Some of the following services are not always available in all locations outside the continental U.S. Call your local Dell representative for information on availability.

Technical Support and Customer Service

Dell's support service is available to answer your questions about Dell™ hardware. Our support staff uses computer-based diagnostics to provide fast, accurate answers.

To contact Dell's support service, see "Before You Call" on page 93, and then see the contact information for your region or go to **support.dell.com**.

DellConnect

DellConnect is a simple online access tool that allows a Dell service and support associate to access your computer through a broadband connection, diagnose your problem and repair it all under your supervision. For more information, go to **support.dell.com** and click DellConnect.

Online Services

You can learn about Dell products and services on the following websites:

www.dell.com

www.dell.com/ap (Asian/Pacific countries only)

www.dell.com/jp (Japan only)

www.euro.dell.com (Europe only)

www.dell.com/la (Latin American and Caribbean countries)

www.dell.ca (Canada only)

You can access Dell Support through the following websites and e-mail addresses:

- Dell Support websites

  support.dell.com

  support.jp.dell.com (Japan only)

  support.euro.dell.com (Europe only)

- Dell Support e-mail addresses

  mobile_support@us.dell.com

  support@us.dell.com

la-techsupport@dell.com (Latin America and Caribbean countries only)

apsupport@dell.com (Asian/Pacific countries only)

- Dell Marketing and Sales e-mail addresses

  apmarketing@dell.com (Asian/Pacific countries only)

  sales_canada@dell.com (Canada only)

- Anonymous file transfer protocol (FTP)

  ftp.dell.com

  Log in as user: `anonymous`, and use your e-mail address as your password.

AutoTech Service

Dell's automated support service—AutoTech—provides recorded answers to the questions most frequently asked by Dell customers about their portable and desktop computers.

When you call AutoTech, use your touch-tone telephone to select the subjects that correspond to your questions. For the telephone number to call for your region, see "Contacting Dell" on page 95.

Automated Order-Status Service

To check on the status of any Dell products that you have ordered, you can go to **support.dell.com**, or you can call the automated order-status service. A recording prompts you for the information needed to locate and report on your order. For the telephone number to call for your region, see "Contacting Dell" on page 95.

Problems With Your Order

If you have a problem with your order, such as missing parts, wrong parts, or incorrect billing, contact Dell for customer assistance. Have your invoice or packing slip handy when you call. For the telephone number to call for your region, see "Contacting Dell" on page 95.

Product Information

If you need information about additional products available from Dell, or if you would like to place an order, visit the Dell website at **www.dell.com**. For the telephone number to call for your region or to speak to a sales specialist, see"Contacting Dell" on page 95.

Returning Items for Warranty Repair or Credit

Prepare all items being returned, whether for repair or credit, as follows:

1. Call Dell to obtain a Return Material Authorization Number, and write it clearly and prominently on the outside of the box.

   For the telephone number to call for your region, see "Contacting Dell" on page 95.

2. Include a copy of the invoice and a letter describing the reason for the return.
3. Include a copy of the Diagnostics Checklist (see "Diagnostics Checklist" on page 94), indicating the tests that you have run and any error messages reported by the Dell Diagnostics (see "Dell Diagnostics" on page 65).
4. Include any accessories that belong with the item(s) being returned (power cables, software floppy disks, guides, and so on) if the return is for credit.
5. Pack the equipment to be returned in the original (or equivalent) packing materials.

You are responsible for paying shipping expenses. You are also responsible for insuring any product returned, and you assume the risk of loss during shipment to Dell. Collect On Delivery (C.O.D.) packages are not accepted.

Returns that are missing any of the preceding requirements will be refused at Dell's receiving dock and returned to you.

Before You Call

NOTE: Have your Express Service Code ready when you call. The code helps Dell's automated-support telephone system direct your call more efficiently. You may also be asked for your Service Tag (located on the back or bottom of your computer).

Remember to fill out the Diagnostics Checklist (see "Diagnostics Checklist" on page 94). If possible, turn on your computer before you call Dell for assistance and call from a telephone at or near the computer. You may be asked to type some commands at the keyboard, relay detailed information during operations, or try other troubleshooting steps possible only at the computer itself. Ensure that the computer documentation is available.

CAUTION: Before working inside your computer, follow the safety instructions in your *Product Information Guide*.

Diagnostics Checklist

Name:

Date:

Address:

Phone number:

Service Tag (bar code on the back or bottom of the computer):

Express Service Code:

Return Material Authorization Number (if provided by Dell support technician):

Operating system and version:

Devices:

Expansion cards:

Are you connected to a network? Yes No

Network, version, and network adapter:

Programs and versions:

See your operating system documentation to determine the contents of the system's start-up files. If the computer is connected to a printer, print each file. Otherwise, record the contents of each file before calling Dell.

Error message, beep code, or diagnostic code:

Description of problem and troubleshooting procedures you performed:

Contacting Dell

NOTE: If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1. Visit **support.dell.com**.
2. Verify your country or region in the **Choose A Country/Region** drop-down menu at the bottom of the page.
3. Click **Contact Us** on the left side of the page.
4. Select the appropriate service or support link based on your need.
5. Choose the method of contacting Dell that is convenient for you.

14

Appendix

FCC Notice (U.S. Only)

FCC Class B

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause interference with radio and television reception. This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTICE: The FCC regulations provide that changes or modifications not expressly approved by Dell Inc. could void your authority to operate this equipment.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the system with respect to the receiver.
- Move the system away from the receiver.
- Plug the system into a different outlet so that the system and the receiver are on different branch circuits.

If necessary, consult a representative of Dell Inc. or an experienced radio/television technician for additional suggestions.

The following information is provided on the device or devices covered in this document in compliance with the FCC regulations:

Product name:	Dell™ XPS One™ A2010
Model number:	MTG
Company name:	Dell Inc. Worldwide Regulatory Compliance & Environmental Affairs One Dell Way Round Rock, TX 78682 USA 512-338-4400

NOTE: For further regulatory information, see your *Product Information Guide*.

Glossary

Terms in this Glossary are provided for informational purposes only and may or may not describe features included with your particular computer.

A

AC — alternating current — The form of electricity that powers your computer when you plug the AC adapter power cable in to an electrical outlet.

ACPI — advanced configuration and power interface — A power management specification that enables Microsoft® Windows® operating systems to put a computer in standby or hibernate mode to conserve the amount of electrical power allocated to each device attached to the computer.

AGP — accelerated graphics port — A dedicated graphics port that allows system memory to be used for video-related tasks. AGP delivers a smooth, true-color video image because of the faster interface between the video circuitry and the computer memory.

AHCI — Advanced Host Controller Interface — An interface for a SATA hard drive Host Controller which allows the storage driver to enable technologies such as Native Command Queuing (NCQ) and hot plug.

ALS — ambient light sensor — A feature that helps to control display brightness.

antivirus software — A program designed to identify, quarantine, and/or delete viruses from your computer.

ASF — alert standards format — A standard to define a mechanism for reporting hardware and software alerts to a management console. ASF is designed to be platform- and operating system-independent.

B

battery life span — The length of time (years) during which a portable computer battery is able to be depleted and recharged.

battery operating time — The length of time (minutes or hours) that a portable computer battery powers the computer.

BIOS — basic input/output system — A program (or utility) that serves as an interface between the computer hardware and the operating system. Unless you understand what effect these settings have on the computer, do not change them. Also referred to as *system setup*.

bit — The smallest unit of data interpreted by your computer.

Blu-ray Disc™ (BD)— An optical storage technology offering storage capacity of up to 50 GB, full 1080p video resolution (HDTV required), and as many as 7.1 channels of native, uncompressed surround sound.

Bluetooth® wireless technology — A wireless technology standard for short-range (9 m [29 feet]) networking devices that allows for enabled devices to automatically recognize each other.

boot sequence — Specifies the order of the devices from which the computer attempts to boot.

bootable media — A CD, DVD, or floppy disk that you can use to start your computer. In case your hard drive is damaged or your computer has a virus, ensure that you always have a bootable CD, DVD, or floppy disk available. Your *Drivers and Utilities* media is an example of bootable media.

bps — bits per second — The standard unit for measuring data transmission speed.

BTU — British thermal unit — A measurement of heat output.

bus — A communication pathway between the components in your computer.

bus speed — The speed, given in MHz, that indicates how fast a bus can transfer information.

byte — The basic data unit used by your computer. A byte is usually equal to 8 bits.

C

C — Celsius — A temperature measurement scale where 0° is the freezing point and 100° is the boiling point of water.

cache — A special high-speed storage mechanism which can be either a reserved section of main memory or an independent high-speed storage device. The cache enhances the efficiency of many processor operations.

L1 cache — Primary cache stored inside the processor.

L2 cache — Secondary cache which can either be external to the processor or incorporated into the processor architecture.

carnet — An international customs document that facilitates temporary imports into foreign countries. Also known as a *merchandise passport*.

CD-R — CD recordable — A recordable version of a CD. Data can be recorded only once onto a CD-R. Once recorded, the data cannot be erased or written over.

CD-RW — CD rewritable — A rewritable version of a CD. Data can be written to a CD-RW disc, and then erased and written over (rewritten).

CD-RW drive — A drive that can read CDs and write to CD-RW (rewritable CDs) and CD-R (recordable CDs) discs. You can write to CD-RW discs multiple times, but you can write to CD-R discs only once.

CD-RW/DVD drive — A drive, sometimes referred to as a combo drive, that can read CDs and DVDs and write to CD-RW (rewritable CDs) and CD-R (recordable CDs) discs. You can write to CD-RW discs multiple times, but you can write to CD-R discs only once.

clock speed — The speed, given in MHz, that indicates how fast computer components that are connected to the system bus operate.

CMOS — A type of electronic circuit. Computers use a small amount of battery-powered CMOS memory to hold date, time, and system setup options.

COA — Certificate of Authenticity — The Windows alpha-numeric code located on a sticker on your computer. Also referred to as the *Product Key* or *Product ID*.

Control Panel — A Windows utility that allows you to modify operating system and hardware settings, such as display settings.

controller — A chip that controls the transfer of data between the processor and memory or between the processor and devices.

CRIMM — continuity rambus in-line memory module — A special module that has no memory chips and is used to fill unused RIMM slots.

cursor — The marker on a display or screen that shows where the next keyboard, touch pad, or mouse action will occur. It often is a blinking solid line, an underline character, or a small arrow.

D

DDR SDRAM — double-data-rate SDRAM — A type of SDRAM that doubles the data burst cycle, improving system performance.

DDR2 SDRAM — double-data-rate 2 SDRAM — A type of DDR SDRAM that uses a 4-bit prefetch and other architectural changes to boost memory speed to over 400 MHz.

device — Hardware such as a disk drive, printer, or keyboard that is installed in or connected to your computer.

device driver — See *driver*.

DIMM — dual in-line memory module — A circuit board with memory chips that connects to a memory module on the system board.

DIN connector — A round, six-pin connector that conforms to DIN (Deutsche Industrie-Norm) standards; it is typically used to connect PS/2 keyboard or mouse cable connectors.

disk striping — A technique for spreading data over multiple disk drives. Disk striping can speed up operations that retrieve data from disk storage. Computers that use disk striping generally allow the user to select the data unit size or stripe width.

DMA — direct memory access — A channel that allows certain types of data transfer between RAM and a device to bypass the processor.

docking device — provides port replication, cable management, and security features to adapt your notebook to a desktop workspace.

DMTF — Distributed Management Task Force — A consortium of hardware and software companies who develop management standards for distributed desktop, network, enterprise, and Internet environments.

domain — A group of computers, programs, and devices on a network that are administered as a unit with common rules and procedures for use by a specific group of users. A user logs on to the domain to gain access to the resources.

DRAM — dynamic random-access memory — Memory that stores information in integrated circuits containing capacitors.

driver — Software that allows the operating system to control a device such as a printer. Many devices do not work properly if the correct driver is not installed in the computer.

DSL — Digital Subscriber Line — A technology that provides a constant, high-speed Internet connection through an analog telephone line.

dual-core — A technology in which two physical computational units exist inside a single processor package, thereby increasing computing efficiency and multi-tasking ability.

dual display mode — A display setting that allows you to use a second monitor as an extension of your display. Also referred to as *extended display mode*.

DVD-R — DVD recordable — A recordable version of a DVD. Data can be recorded only once onto a DVD-R. Once recorded, the data cannot be erased or written over.

DVD+RW — DVD rewritable — A rewritable version of a DVD. Data can be written to a DVD+RW disc, and then erased and written over (rewritten). (DVD+RW technology is different from DVD-RW technology.)

DVD+RW drive — drive that can read DVDs and most CD media and write to DVD+RW (rewritable DVDs) discs.

DVI — digital video interface — A standard for digital transmission between a computer and a digital video display.

E

ECC — error checking and correction — A type of memory that includes special circuitry for testing the accuracy of data as it passes in and out of memory.

ECP — extended capabilities port — A parallel connector design that provides improved bidirectional data transmission. Similar to EPP, ECP uses direct memory access to transfer data and often improves performance.

EIDE — enhanced integrated device electronics — An improved version of the IDE interface for hard drives and CD drives.

EMI — electromagnetic interference — Electrical interference caused by electromagnetic radiation.

ENERGY STAR® — Environmental Protection Agency requirements that decrease the overall consumption of electricity.

EPP — enhanced parallel port — A parallel connector design that provides bidirectional data transmission.

ESD — electrostatic discharge — A rapid discharge of static electricity. ESD can damage integrated circuits found in computer and communications equipment.

expansion card — A circuit board that installs in an expansion slot on the system board in some computers, expanding the capabilities of the computer. Examples include video, modem, and sound cards.

expansion slot — A connector on the system board (in some computers) where you insert an expansion card, connecting it to the system bus.

ExpressCard — A removable I/O card adhering to the PCMCIA standard. Modems and network adapters are common types of ExpressCards. ExpressCards support both the PCI Express and USB 2.0 standard.

Express Service Code — A numeric code located on a sticker on your Dell™ computer. Use the Express Service Code when contacting Dell for assistance. Express Service Code service may not be available in some countries.

extended display mode — A display setting that allows you to use a second monitor as an extension of your display. Also referred to as *dual display mode*.

extended PC Card — A PC Card that extends beyond the edge of the PC Card slot when installed.

F

Fahrenheit — A temperature measurement scale where 32° is the freezing point and 212° is the boiling point of water.

FBD — fully-buffered DIMM — A DIMM with DDR2 DRAM chips and an Advanced Memory Buffer (AMB) that speeds communication between the DDR2 SDRAM chips and the system.

FCC — Federal Communications Commission — A U.S. agency responsible for enforcing communications-related regulations that state how much radiation computers and other electronic equipment can emit.

fingerprint reader — A strip sensor that uses your unique fingerprint to authenticate your user identity to help secure your computer.

folder — A term used to describe space on a disk or drive where files are organized and grouped. Files in a folder can be viewed and ordered in various ways, such as alphabetically, by date, and by size.

format — The process that prepares a drive or disk for file storage. When a drive or disk is formatted, the existing information on it is lost.

FSB — front side bus — The data path and physical interface between the processor and RAM.

FTP — file transfer protocol — A standard Internet protocol used to exchange files between computers connected to the Internet.

G

G — gravity — A measurement of weight and force.

GB — gigabyte — A measurement of data storage that equals 1024 MB (1,073,741,824 bytes). When used to refer to hard drive storage, the term is often rounded to 1,000,000,000 bytes.

GHz — gigahertz — A measurement of frequency that equals one thousand million Hz, or one thousand MHz. The speeds for computer processors, buses, and interfaces are often measured in GHz.

graphics mode — A video mode that can be defined as *x* horizontal pixels by *y* vertical pixels by *z* colors. Graphics modes can display an unlimited variety of shapes and fonts.

GUI — graphical user interface — Software that interacts with the user by means of menus, windows, and icons. Most programs that operate on the Windows operating systems are GUIs.

H

hard drive — A drive that reads and writes data on a hard disk. The terms hard drive and hard disk are often used interchangeably.

heat sink — A metal plate on some processors that helps dissipate heat.

hibernate mode — A power management mode that saves everything in memory to a reserved space on the hard drive and then turns off the computer. When you restart the computer, the memory information that was saved to the hard drive is automatically restored.

HTTP — hypertext transfer protocol — A protocol for exchanging files between computers connected to the Internet.

Hyper-Threading — Hyper-Threading is an Intel technology that can enhance overall computer performance by allowing one physical processor to function as two logical processors, capable of performing certain tasks simultaneously.

Hz — hertz — A unit of frequency measurement that equals 1 cycle per second. Computers and electronic devices are often measured in kilohertz (kHz), megahertz (MHz), gigahertz (GHz), or terahertz (THz).

I

IC — integrated circuit — A semiconductor wafer, or chip, on which thousands or millions of tiny electronic components are fabricated for use in computer, audio, and video equipment.

IDE — integrated device electronics — An interface for mass storage devices in which the controller is integrated into the hard drive or CD drive.

IEEE 1394 — Institute of Electrical and Electronics Engineers, Inc. — A high-performance serial bus used to connect IEEE 1394-compatible devices, such as digital cameras and DVD players, to the computer.

infrared sensor — A port that allows you to transfer data between the computer and infrared-compatible devices without using a cable connection.

integrated — Usually refers to components that are physically located on the computer's system board. Also referred to as *built-in*.

I/O — input/output — An operation or device that enters and extracts data from your computer. Keyboards and printers are I/O devices.

I/O address — An address in RAM that is associated with a specific device (such as a serial connector, parallel connector, or expansion slot) and allows the processor to communicate with that device.

IrDA — Infrared Data Association — The organization that creates international standards for infrared communications.

IRQ — interrupt request — An electronic pathway assigned to a specific device so that the device can communicate with the processor. Each device connection must be assigned an IRQ. Although two devices can share the same IRQ assignment, you cannot operate both devices simultaneously.

ISP — Internet service provider — A company that allows you to access its host server to connect directly to the Internet, send and receive e-mail, and access websites. The ISP typically provides you with a software package, user name, and access phone numbers for a fee.

K

Kb — kilobit — A unit of data that equals 1024 bits. A measurement of the capacity of memory integrated circuits.

KB — kilobyte — A unit of data that equals 1024 bytes but is often referred to as 1000 bytes.

key combination — A command requiring you to press multiple keys at the same time.

kHz — kilohertz — A measurement of frequency that equals 1000 Hz.

L

LAN — local area network — A computer network covering a small area. A LAN usually is confined to a building or a few nearby buildings. A LAN can be connected to another LAN over any distance through telephone lines and radio waves to form a wide area network (WAN).

LCD — liquid crystal display — The technology used by portable computer and flat-panel displays.

LED — light-emitting diode — An electronic component that emits light to indicate the status of the computer.

local bus — A data bus that provides a fast throughput for devices to the processor.

LPT — line print terminal — The designation for a parallel connection to a printer or other parallel device.

M

Mb — megabit — A measurement of memory chip capacity that equals 1024 Kb.

Mbps — megabits per second — One million bits per second. This measurement is typically used for transmission speeds for networks and modems.

MB — megabyte — A measurement of data storage that equals 1,048,576 bytes. 1 MB equals 1024 KB. When used to refer to hard drive storage, the term is often rounded to 1,000,000 bytes.

MB/sec — megabytes per second — One million bytes per second. This measurement is typically used for data transfer ratings.

media bay — A bay that supports devices such as optical drives, a second battery, or a Dell TravelLite™ module.

memory — A temporary data storage area inside your computer. Because the data in memory is not permanent, it is recommended that you frequently save your files while you are working on them, and always save your files before you shut down the computer. Your computer can contain several different forms of memory, such as RAM, ROM, and video memory. Frequently, the word memory is used as a synonym for RAM.

memory address — A specific location where data is temporarily stored in RAM.

memory mapping — The process by which the computer assigns memory addresses to physical locations at start-up. Devices and software can then identify information that the processor can access.

memory module — A small circuit board containing memory chips, which connects to the system board.

MHz — megahertz — A measure of frequency that equals 1 million cycles per second. The speeds for computer processors, buses, and interfaces are often measured in MHz.

Mini PCI — A standard for integrated peripheral devices with an emphasis on communications such as modems and NICs. A Mini PCI card is a small external card that is functionally equivalent to a standard PCI expansion card.

Mini-Card — A small card designed for integrated peripherals, such as communication NICs. The Mini-Card is functionally equivalent to a standard PCI expansion card.

modem — A device that allows your computer to communicate with other computers over analog telephone lines. Three types of modems include: external, PC Card, and internal. You typically use your modem to connect to the Internet and exchange e-mail.

module bay — See *media bay*.

MP — megapixel — A measure of image resolution used for digital cameras.

ms — millisecond — A measure of time that equals one thousandth of a second. Access times of storage devices are often measured in ms.

N

network adapter — A chip that provides network capabilities. A computer may include a network adapter on its system board, or it may contain a PC Card with an adapter on it. A network adapter is also referred to as a *NIC* (network interface controller).

NIC — See *network adapter.*

notification area — The section of the Windows taskbar that contains icons for providing quick access to programs and computer functions, such as the clock, volume control, and print status. Also referred to as *system tray.*

ns — nanosecond — A measure of time that equals one billionth of a second.

NVRAM — nonvolatile random access memory — A type of memory that stores data when the computer is turned off or loses its external power source. NVRAM is used for maintaining computer configuration information such as date, time, and other system setup options that you can set.

O

optical drive — A drive that uses optical technology to read or write data from CDs, DVDs, or DVD+RWs. Example of optical drives include CD drives, DVD drives, CD-RW drives, and CD-RW/DVD combo drives.

P

parallel connector — An I/O port often used to connect a parallel printer to your computer. Also referred to as an *LPT port*.

partition — A physical storage area on a hard drive that is assigned to one or more logical storage areas known as logical drives. Each partition can contain multiple logical drives.

PC Card — A removable I/O card adhering to the PCMCIA standard. Modems and network adapters are common types of PC Cards.

PCI — peripheral component interconnect — PCI is a local bus that supports 32-and 64-bit data paths, providing a high-speed data path between the processor and devices such as video, drives, and networks.

PCI Express — A modification to the PCI interface that boosts the data transfer rate between the processor and the devices attached to it. PCI Express can transfer data at speeds from 250 MB/sec to 4 GB/sec. If the PCI Express chip set and the device are capable of different speeds, they will operate at the slower speed.

PCMCIA — Personal Computer Memory Card International Association — The organization that establishes standards for PC Cards.

PIO — programmed input/output — A method of transferring data between two devices through the processor as part of the data path.

pixel — A single point on a display screen. Pixels are arranged in rows and columns to create an image. A video resolution, such as 800 x 600, is expressed as the number of pixels across by the number of pixels up and down.

Plug-and-Play — The ability of the computer to automatically configure devices. Plug and Play provides automatic installation, configuration, and compatibility with existing hardware if the BIOS, operating system, and all devices are Plug and Play compliant.

POST — power-on self-test — Diagnostics programs, loaded automatically by the BIOS, that perform basic tests on the major computer components, such as memory, hard drives, and video. If no problems are detected during POST, the computer continues the start-up.

processor — A computer chip that interprets and executes program instructions. Sometimes the processor is referred to as the CPU (central processing unit).

PS/2 — personal system/2 — A type of connector for attaching a PS/2-compatible keyboard, mouse, or keypad.

PXE — pre-boot execution environment — A WfM (Wired for Management) standard that allows networked computers that do not have an operating system to be configured and started remotely.

R

RAID — redundant array of independent disks — A method of providing data redundancy. Some common implementations of RAID include RAID 0, RAID 1, RAID 5, RAID 10, and RAID 50.

RAM — random-access memory — The primary temporary storage area for program instructions and data. Any information stored in RAM is lost when you shut down your computer.

readme file — A text file included with a software package or hardware product. Typically, readme files provide installation information and describe new product enhancements or corrections that have not yet been documented.

read-only — Data and/or files you can view but cannot edit or delete. A file can have read-only status if:

- It resides on a physically write-protected floppy disk, CD, or DVD.
- It is located on a network in a directory and the system administrator has assigned rights only to specific individuals.

refresh rate — The frequency, measured in Hz, at which your screen's horizontal lines are recharged (sometimes also referred to as its *vertical frequency*). The higher the refresh rate, the less video flicker can be seen by the human eye.

resolution — The sharpness and clarity of an image produced by a printer or displayed on a monitor. The higher the resolution, the sharper the image.

RFI — radio frequency interference — Interference that is generated at typical radio frequencies, in the range of 10 kHz to 100,000 MHz. Radio frequencies are at the lower end of the electromagnetic frequency spectrum and are more likely to have interference than the higher frequency radiations, such as infrared and light.

ROM — read-only memory — Memory that stores data and programs that cannot be deleted or written to by the computer. ROM, unlike RAM, retains its contents after you shut down your computer. Some programs essential to the operation of your computer reside in ROM.

RPM — revolutions per minute — The number of rotations that occur per minute. Hard drive speed is often measured in rpm.

RTC — real time clock — Battery-powered clock on the system board that keeps the date and time after you shut down the computer.

RTCRST — real-time clock reset — A jumper on the system board of some computers that can often be used for troubleshooting problems.

S

SAS — serial attached SCSI — A faster, serial version of the SCSI interface (as opposed to the original SCSI parallel architecture).

SATA — serial ATA — A faster, serial version of the ATA (IDE) interface.

ScanDisk — A Microsoft utility that checks files, folders, and the hard disk's surface for errors. ScanDisk often runs when you restart the computer after it has stopped responding.

SCSI — small computer system interface — A high-speed interface used to connect devices to a computer, such as hard drives, CD drives, printers, and scanners. The SCSI can connect many devices using a single controller. Each device is accessed by an individual identification number on the SCSI controller bus.

SDRAM — synchronous dynamic random-access memory — A type of DRAM that is synchronized with the optimal clock speed of the processor.

serial connector — An I/O port often used to connect devices such as a handheld digital device or digital camera to your computer.

Service Tag — A bar code label on your computer that identifies your computer when you access Dell Support at **support.dell.com** or when you call Dell for customer service or technical support.

setup program — A program that is used to install and configure hardware and software. The **setup.exe** or **install.exe** program comes with most Windows software packages. *Setup program* differs from *system setup*.

shortcut — An icon that provides quick access to frequently used programs, files, folders, and drives. When you place a shortcut on your Windows desktop and double-click the icon, you can open its corresponding folder or file without having to find it first. Shortcut icons do not change the location of files. If you delete a shortcut, the original file is not affected. Also, you can rename a shortcut icon.

SIM — Subscriber Identity Module — A SIM card contains a microchip that encrypts voice and data transmissions. SIM cards can be used in phones or portable computers.

smart card — A card that is embedded with a processor and a memory chip. Smart cards can be used to authenticate a user on computers equipped for smart cards.

S/PDIF — Sony/Philips Digital Interface — An audio transfer file format that allows the transfer of audio from one file to another without converting it to and from an analog format, which could degrade the quality of the file.

standby mode — A power management mode that shuts down all unnecessary computer operations to save energy.

Strike Zone™ — Reinforced area of the platform base that protects the hard drive by acting as a dampening device when a computer experiences resonating shock or is dropped (whether the computer is on or off).

surge protectors — Prevent voltage spikes, such as those that may occur during an electrical storm, from entering the computer through the electrical outlet. Surge protectors do not protect against lightning strikes or against brownouts, which occur when the voltage drops more than 20 percent below the normal AC-line voltage level.

Network connections cannot be protected by surge protectors. Always disconnect the network cable from the network connector during electrical storms.

SVGA — super-video graphics array — A video standard for video cards and controllers. Typical SVGA resolutions are 800 x 600 and 1024 x 768.

The number of colors and resolution that a program displays depends on the capabilities of the monitor, the video controller and its drivers, and the amount of video memory installed in the computer.

S-video TV-out — A connector used to attach a TV or digital audio device to the computer.

SXGA — super-extended graphics array — A video standard for video cards and controllers that supports resolutions up to 1280 x 1024.

SXGA+ — super-extended graphics array plus — A video standard for video cards and controllers that supports resolutions up to 1400 x 1050.

system board — The main circuit board in your computer. Also known as the *motherboard*.

system setup — A utility that serves as an interface between the computer hardware and the operating system. System setup allows you to configure user-selectable options in the BIOS, such as date and time or system password. Unless you understand what effect the settings have on the computer, do not change the settings for this program.

T

TAPI — telephony application programming interface — Enables Windows programs to operate with a wide variety of telephony devices, including voice, data, fax, and video.

text editor — A program used to create and edit files that contain only text; for example, Windows Notepad uses a text editor. Text editors do not usually provide word wrap or formatting functionality (the option to underline, change fonts, and so on).

TPM — trusted platform module — A hardware-based security feature that when combined with security software enhances network and computer security by enabling features such as file and e-mail protection.

travel module — A plastic device designed to fit inside the module bay of a portable computer to reduce the weight of the computer.

U

UAC — user account control— Microsoft Windows Vista™ security feature that, when enabled, provides an added layer of security between user accounts and access to operating system settings.

UMA — unified memory allocation — System memory dynamically allocated to video.

UPS — uninterruptible power supply — A backup power source used when the electrical power fails or drops to an unacceptable voltage level. A UPS keeps a computer running for a limited amount of time when there is no electrical power. UPS systems typically provide surge suppression and may also provide voltage regulation. Small UPS systems provide battery power for a few minutes to enable you to shut down your computer.

USB — universal serial bus — A hardware interface for a low-speed device such as a USB-compatible keyboard, mouse, joystick, scanner, set of speakers, printer, broadband devices (DSL and cable modems), imaging devices, or storage devices. Devices are plugged directly in to a 4-pin socket on your computer or in to a multi-port hub that plugs in to your computer. USB devices can be connected and disconnected while the computer is turned on, and they can also be daisy-chained together.

UTP — unshielded twisted pair — Describes a type of cable used in most telephone networks and some computer networks. Pairs of unshielded wires are twisted to protect against electromagnetic interference, rather than relying on a metal sheath around each pair of wires to protect against interference.

UXGA — ultra extended graphics array — A video standard for video cards and controllers that supports resolutions up to 1600 x 1200.

V

video controller — The circuitry on a video card or on the system board (in computers with an integrated video controller) that provides the video capabilities—in combination with the monitor—for your computer.

video memory — Memory that consists of memory chips dedicated to video functions. Video memory is usually faster than system memory. The amount of video memory installed primarily influences the number of colors that a program can display.

video mode — A mode that describes how text and graphics are displayed on a monitor. Graphics-based software, such as Windows operating systems, displays in video modes that can be defined as *x* horizontal pixels by *y* vertical pixels by *z* colors. Character-based software, such as text editors, displays in video modes that can be defined as *x* columns by *y* rows of characters.

video resolution — See *resolution*.

virus — A program that is designed to inconvenience you or to destroy data stored on your computer. A virus program moves from one computer to another through an infected disk, software downloaded from the Internet, or e-mail attachments. When an infected program starts, its embedded virus also starts.

A common type of virus is a boot virus, which is stored in the boot sectors of a floppy disk. If the floppy disk is left in the drive when the computer is shut down and then

turned on, the computer is infected when it reads the boot sectors of the floppy disk expecting to find the operating system. If the computer is infected, the boot virus may replicate itself onto all the floppy disks that are read or written in that computer until the virus is eradicated.

V — volt — The measurement of electric potential or electromotive force. One V appears across a resistance of 1 ohm when a current of 1 ampere flows through that resistance.

W

W — watt — The measurement of electrical power. One W is 1 ampere of current flowing at 1 volt.

WHr — watt-hour — A unit of measure commonly used to indicate the approximate capacity of a battery. For example, a 66-WHr battery can supply 66 W of power for 1 hour or 33 W for 2 hours.

wallpaper — The background pattern or picture on the Windows desktop. Change your wallpaper through the Windows Control Panel. You can also scan in your favorite picture and make it wallpaper.

WLAN — wireless local area network. A series of interconnected computers that communicate with each other over the air waves using access points or wireless routers to provide Internet access.

write-protected — Files or media that cannot be changed. Use write-protection when you want to protect data from being changed or destroyed. To write-protect a 3.5-inch floppy disk, slide its write-protect tab to the open position.

WWAN — wireless wide area network. A wireless high-speed data network using cellular technology and covering a much larger geographic area than WLAN.

WXGA — wide-aspect extended graphics array — A video standard for video cards and controllers that supports resolutions up to 1280 x 800.

X

XGA — extended graphics array — A video standard for video cards and controllers that supports resolutions up to 1024 x 768.

Z

ZIF — zero insertion force — A type of socket or connector that allows a computer chip to be installed or removed with no stress applied to either the chip or its socket.

Zip — A popular data compression format. Files that have been compressed with the Zip format are called Zip files and usually have a filename extension of **.zip**. A special kind of zipped file is a self-extracting file, which has a filename extension of **.exe**. You can unzip a self-extracting file by double-clicking it.

Zip drive — A high-capacity floppy drive developed by Iomega Corporation that uses 3.5-inch removable disks called Zip disks. Zip disks are slightly larger than regular floppy disks, about twice as thick, and hold up to 100 MB of data.

Index

A

audio device
  enabling, 38

B

battery
  problems, 51

BDs
  about, 34
  playing, 31

Blu-Ray Discs
  playing, 31

boot sequence
  about, 73
  changing, 73-74
  option settings, 73

booting
  to a USB device, 73

brightness
  adjusting, 47

C

CDs
  about, 34
  operating system, 13
  playing, 31

Check Disk, 53

cleaning
  keyboard, 50
  touch pad, 50

computer
  crashes, 56-57
  restore to previous state, 78
  specifications, 83
  stops responding, 56

conflicts
  software and hardware incompatibilities, 78

contacting Dell, 95

copying BDs
  general information, 34
  helpful tips, 37
  how to, 35

copying CDs
  helpful tips, 37
  how to, 35

copying DVDs
  general information, 34
  helpful tips, 37
  how to, 35

D

Dell
  contacting, 95

Dell Diagnostics, 65
Dell support site, 12
DellConnect, 90
diagnostics
  Dell, 65
display
  adjusting brightness, 47
  blank, 52
  hard to read, 52
documentation
  End User License Agreement, 10
  ergonomics, 10
  online, 12
  Product Information Guide, 10
  regulatory, 10
  safety, 10
  warranty, 10
Dolby headphones, setting up, 39
drivers, 75
  about, 75
  identifying, 76
  reinstalling, 76
Drivers and Utilities media
  Dell Diagnostics, 65
drives
  problems, 52
DVDs
  about, 34
  playing, 31

E

e-mail
  problems, 53
End User License Agreement, 10
ergonomics information, 10
error messages
  problems, 54

F

Factory Image Restore, 80

H

hard drive
  problems, 53
hardware
  conflicts, 78
  Dell Diagnostics, 65
Hardware Troubleshooter, 78
Help and Support, 13

I

IEEE 1394
  problems, 55
Internet
  problems, 53

Internet connection
about, 24
options, 24
setting up, 24

K

keyboard
cleaning, 50
optional wireless keyboard, 41
problems, 55

L

labels
Microsoft Windows, 11
Service Tag, 11

M

Media Card Reader, 29
media memory cards
types, 29
memory
problems, 58
messages
error, 54
mouse
optional wireless mouse, 41
problems, 58

N

network
problems, 60

O

operating system
media, 81
reinstalling, 13
Operating System CD, 13
optical drive
problems, 53

P

phone numbers, 95
playing BDs, 31
playing Blu-Ray Discs, 31
playing CDs, 31
playing DVDs, 31
power
button, 18
line conditioners, 28
problems, 60
protection devices, 28
surge protectors, 28
UPS, 28
power light
conditions, 60

printer
cable, 26
connecting, 26
problems, 61
setting up, 26
USB, 27
problems
battery, 51
blue screen, 57
CD-RW drive, 53
computer crashes, 56-57
computer stops responding, 56
conflicts, 78
Dell Diagnostics, 65
display hard to read, 52
display is blank, 52
drives, 52
e-mail, 53
error messages, 54
general problems, 56
hard drive, 53
IEEE 1394, 55
Internet, 53
keyboard, 55
memory, 58
mouse, 58
network, 60
optical drive, 53
power, 60
power light conditions, 60
printer, 61
program crashes, 57
program stops responding, 57
restore to previous state, 78
scanner, 62
problems *(continued)*
software, 57
volume adjusting, 63
Product Information Guide, 10

R

regulatory information, 10

S

S/PDIF digital audio
enabling, 38
safety instructions, 10
scanner
problems, 62
Service Tag, 11
software
conflicts, 78
problems, 57
speakers, 16
specifications, 83
Starting the Dell Diagnostics From the Drivers and Utilities CD, 66
Starting the Dell Diagnostics From Your Hard Drive, 65
support
contacting Dell, 95
support website, 12
System Restore, 78

system setup
entering, 69
options, 70
screens, 69

T

telephone numbers, 95

touch pad
cleaning, 50
customizing, 44

transferring information to a new computer, 25

troubleshooting
conflicts, 78
Dell Diagnostics, 65
Hardware Troubleshooter, 78
Help and Support, 13
restore to previous state, 78

U

uninterruptible power supply. See *UPS*

UPS, 28

USB
booting to devices, 73

V

volume
adjusting, 63

W

warranty information, 10

Windows
Device Driver Rollback, 76
Hardware Troubleshooter, 78
System Restore, 78

Windows Easy Transfer Wizard, 25

Windows Vista
Factory Image Restore, 80
Help and Support, 13
reinstalling, 13
System Restore, 78
Windows Easy Transfer Wizard, 25

wizards
Windows Easy Transfer Wizard, 25